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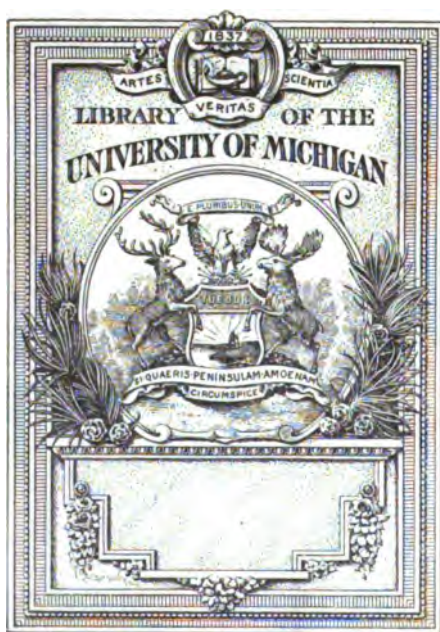
COMPLIMENTS OF

Indiana State Board of Agriculture,

ALEX. HERON, Sec'y,

EXCHANGES ACCEPTABLE.

INDIANAPOLIS, IND.

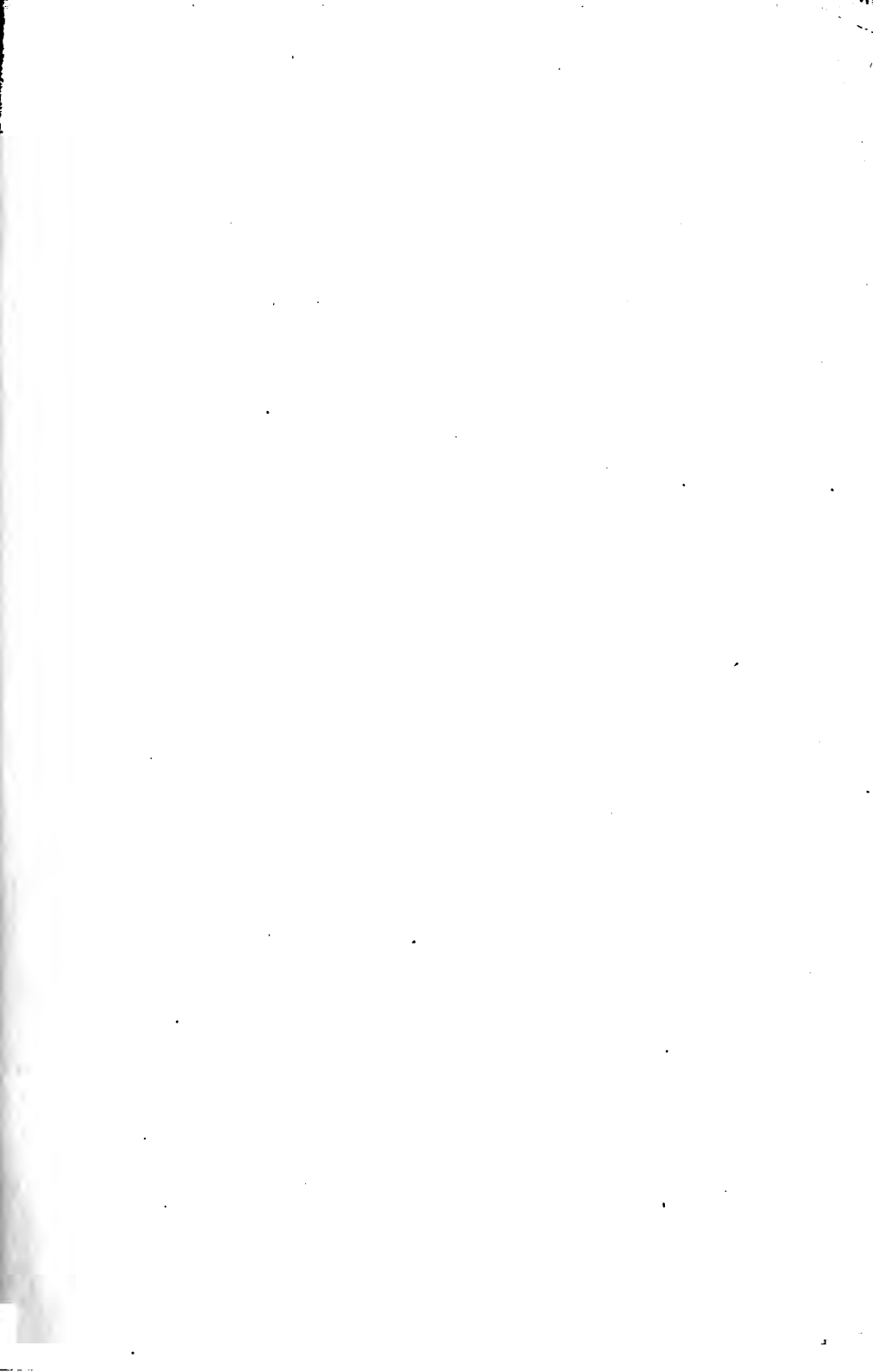


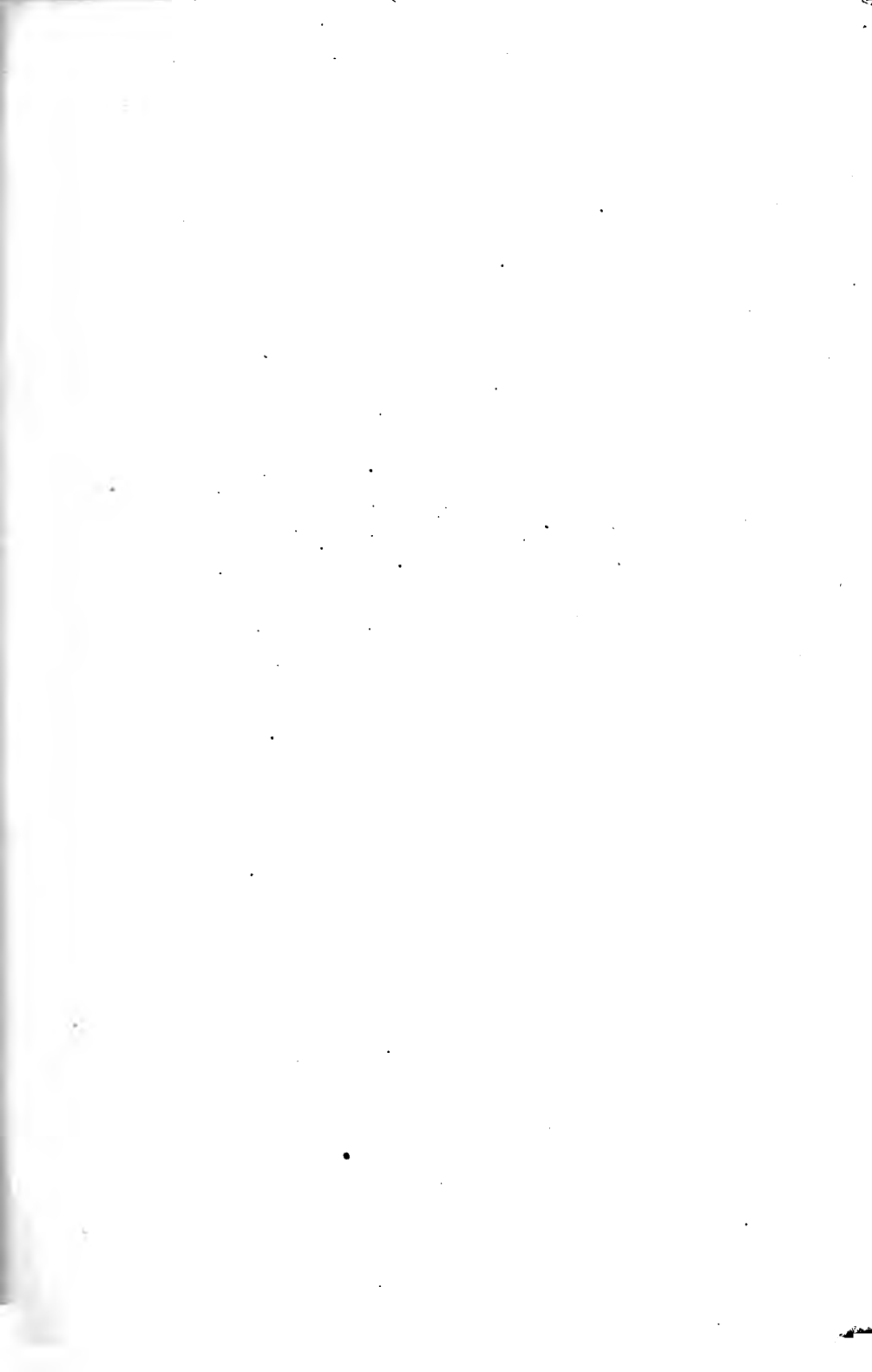
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James D. Williams

THE NEW YORK

INDIANA

Journal of Agriculture

OF THE

STATE OF INDIANA

TO THE LEGISLATURE

BY THE COMMISSIONER
OF AGRICULTURE, MINERAL AND FORESTS
1887



James W. Williams

THIRTIETH ANNUAL REPORT

OF THE

INDIANA

State Board of Agriculture.

VOLUME XXII.

1880.

INCLUDING THE PROCEEDINGS OF THE ANNUAL MEETING OF 1881.

TO THE GOVERNOR.

INDIANAPOLIS:
CARLON & HOLLENBECK, PRINTERS AND BINDERS.
1881.

THE STATE OF INDIANA, EXECUTIVE DEPARTMENT.

Received March 19, 1881; examined by the Governor and by him
filed in the office of the Secretary of State, to be published, as may
be directed, by the Board of Commissioners of Public Printing and
Binding.

FRANK H. BLACKLEDGE,

Secretary.

Filed in the office of Secretary of State, March 19, 1881.

E. R. HAWN,

Secretary of State.

INDIANAPOLIS, IND., February, 1881.

To His Excellency,

ALBERT G. PORTER,

Governor of Indiana:

SIR—In compliance with the act of the General Assembly approved February 1, 1852, we have the honor to submit herewith the Annual Report of the Indiana State Board of Agriculture for the year ending December 31, 1880, together with such matter as is deemed interesting and useful.

Very respectfully,

W. H. RAGAN, *President.*

ALEX. HERON, *Secretary.*

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OFFICERS OF THE INDIANA STATE BOARD.

(ELECTED BY THE BOARD OF AGRICULTURE.)

OFFICERS FOR 1880.

HON. W. H. RAGAN.....President.
HENRY T. SAMPLE.....Vice-President.
ALEX. HERON.....Secretary.
MAJ. JAMES A. WILDMAN.....Treasurer.
HON. FIELDING BEELERGeneral Sup't.

EXECUTIVE COMMITTEE.

HON. W. H. RAGAN, President *ex-officio*.
HON. JACOB MUTZ. JOHN P. BARNES.
W. B. SEWARD. CAPT. H. C. MEREDITH.

MEMBERS OF THE STATE BOARD OF AGRICULTURE 1880.

(ELECTED BY THE DELEGATES FROM AGRICULTURAL SOCIETIES.)

1st District—Robert Mitchell, Princeton, Gibson county.
2d District—Hon. R. P. Haynes, Washington, Daviess county.
3d District—B. H. Hancock, Fredericksburg, Washington county.
4th District—Hon. W. B. Seward, Bloomington, Monroe county.
5th District—J. W. Cofield, Rising Sun, Ohio county.
6th District—S. R. Quick, Columbus, Bartholomew county.
7th District—Hon. Jacob Mutz, Edinburg, Shelby county.
8th District—Dempsey Seybold, Bridgeton, Parke county.
9th District—Hon. W. H. Ragan, Clayton, Hendricks county.
10th District—Henry C. Meredith, Cambridge City, Wayne county.
11th District—John P. Barns, Anderson, Madison county.
12th District—H. T. Sample, Lafayette, Tippecanoe county.
13th District—John N. Turner, Marion, Grant county.
14th District—L. B. Custer, Logansport, Cass county.
15th District—Hon. John Sutherland, Laporte, Laporte county.
16th District—Hon. R. M. Lockhart, Waterloo, DeKalb county.

INDIANA AGRICULTURAL DISTRICTS.

The State Board of Agriculture consists of sixteen members, chosen from the following districts:

1st District—Posey, Vanderburgh, Gibson, Warrick and Spencer counties.

2d District—Pike, Dubois, Martin, Daviess, Knox and Sullivan counties.

3d District—Perry, Crawford, Harrison, Floyd and Washington counties.

4th District—Orange, Lawrence, Jackson, Monroe, Greene, Brown and Scott counties.

5th District—Clark, Jefferson, Switzerland, Jennings, Ohio and Ripley counties.

6th District—Dearborn, Franklin, Decatur, Bartholomew and Rush counties.

7th District—Johnson, Shelby, Morgan and Marion counties.

8th District—Owen, Clay, Vigo, Parke and Vermillion counties.

9th District—Putnam, Hendricks, Montgomery and Boone counties.

10th District—Fayette, Wayne, Union and Henry counties.

11th District—Randolph, Delaware, Madison, Hancock, Hamilton, Tipton and Jay counties.

12th District—Clinton, Fountain, Tippecanoe, Warren, Newton, Benton and White counties.

13th District—Blackford, Grant, Huntington, Wells, Adams, Wabash and Howard counties.

14th District—Carroll, Cass, Miami, Fulton, Pulaski, Jasper and Starke counties.

15th District—Marshall, Laporte, St. Joseph, Elkhart, Lake and Porter counties.

16th District—Allen, Lagrange, Whitley, DeKalb, Noble, Steuben and Kosciusko counties.

Chosen for two years, the term of service of one-half expires each year, to-wit: Those representing the first, second, third, fourth, seventh, fourteenth, fifteenth and sixteenth, expired at the annual meeting of 1880, and those representing the fifth, sixth, eighth, ninth, tenth, eleventh, twelfth and thirteenth districts expire at the annual meeting in January, 1881.

STATE INDUSTRIAL ASSOCIATIONS.

OFFICERS FOR THE YEAR 1881.

HEADQUARTERS IN THE AGRICULTURAL ROOMS, CORNER OF
TENNESSEE AND MARKET STREETS.

Indiana State Board of Agriculture.

President, Hon. R. M. Lockhart, Waterloo, DeKalb county; Secretary, Alex. Heron, Indianapolis, Marion county. Organized May, 1854.

Indiana Horticultural Society.

President, Sylvester Johnson, Irvington, Marion county; Secretary, Hon. W. H. Ragan, Clayton, Hendricks county. Organized 1842.

State Association of Short-Horn Breeders.

President, Hon. Thomas Nelson, Bloomingdale, Parke county; Secretary, T. W. W. Sunman, Spades, Ripley county. Organized May, 1872.

Indiana Dairymen's Association.

President, Asher Kellum, Friendswood, Hendricks county; Secretary, G. C. Stevens, Indianapolis. Organized September, 1876.

Indiana Swine Breeders' Association.

President, A. S. Gilmore, Greensburg, Decatur county; Secretary, W. M. Wiley, Augusta Station, Marion county. Organized January, 1877.

Indiana Wool Grower's Association.

President, Fielding Beeler, Indianapolis, Marion county; Secretary, J. W. Robe, Greencastle, Putnam county. Organized October, 1876.

Indiana Poultry Breeders' Association.

President, H. C. G. Bals, Indianapolis, Marion county; Secretary, Dr. W. J. Elstun, Indianapolis, Marion county. Organized, January, 1875.

Indiana Bee Keepers' Association.

President, Dr. J. H. Orear, Lizton, Hendricks county; Secretary, F. L. Daugherty, Indianapolis. Organized October, 1879.

Indiana Tile Makers' Association.

President, J. T. Stringer, Kokomo, Howard county; Secretary, J. J. Billingsley, Marion county. Organized November, 1876.

Indiana Woman's State Industrial Association.

President, Mrs. Dr. M. E. Haggart, Indianapolis, Marion county; Secretary, Mrs. F. M. Adkinson, Indianapolis, Marion county.

BOARD OF AGRICULTURE.

A TABLE, Showing the Officers, Place and Receipts of each Fair held by the State Board of Agriculture.

Year.	President.	Secretary.	Treasurer.	Gen. Superintendent.	Place of Fair.	Premiums Paid.	Receipts of Fair.
1853...	Gov. Joseph A. Wright.	John B. Dillon.	Royal Mayhew.	W. T. Dennis.	Indianapolis.	.....	\$4,651 55
1853...	Gov. Joseph A. Wright.	John B. Dillon.	Royal Mayhew.	J. J. Ringham.	Lafayette.	.....	6,751 55
1854...	Gov. Joseph A. Wright.	Wm. T. Dennis.	Royal Mayhew.	W. T. Dennis.	Madison.	.....	7,480 77
1855...	Gen. Joseph Orr.	John B. Dillon.	S. A. Buell.	Calvin Fletcher, Jr.	Indianapolis.	\$3,753 00	10,828 75
1856...	Dr. A. C. Stevenson.	Ignatius Brown.	S. A. Buell.	Calvin Fletcher, Jr.	Indianapolis.	4,295 00	14,873 34
1857...	Dr. A. C. Stevenson.	Ignatius Brown.	S. A. Buell.	Calvin Fletcher, Jr.	Indianapolis.	4,127 00	14,068 75
1858...	Dr. A. C. Stevenson.	John B. Dillon.	Thomas H. Sharpe.	Calvin Fletcher, Jr.	Indianapolis.	.....	11,500 00
1859...	George D. Wagner.	John B. Dillon.	Thomas H. Sharpe.	James L. Bradley.	New Albany.	6,153 00	8,590 50
1860...	George D. Wagner.	Wm. T. Dennis.	Thomas H. Sharpe.	James L. Bradley.	Indianapolis.	3,827 00	11,903 00
1861...	D. P. Holloway.	Wm. T. Dennis.	H. A. Fletcher.	James L. Bradley.	No Fair.	.....	.....
1862...	James D. Williams.	W. H. Loomis.	H. A. Fletcher.	J. A. Grosvenor.	Indianapolis.	3,994 00	4,134 08
1863...	A. D. Hamrick.	W. H. Loomis.	H. A. Fletcher.	J. A. Grosvenor.	Indianapolis.	.....	9,553 82
1864...	Stearns Fisher.	W. H. Loomis.	Francis King.	W. H. Loomis.	Indianapolis.	4,131 00	10,785 50
1865...	Stearns Fisher.	W. H. Loomis.	Francis King.	J. A. Grosvenor.	Fort Wayne.	4,075 00	11,597 55
1866...	Stearns Fisher.	W. H. Loomis.	Francis King.	J. A. Grosvenor.	Indianapolis.	.....	17,179 36
1867...	A. D. Hamrick.	A. J. Holmes.	Carlos Dickson.	J. B. Sullivan.	Terre Haute.	6,331 00	17,148 05
1868...	A. D. Hamrick.	A. J. Holmes.	Carlos Dickson.	J. B. Sullivan.	Indianapolis.	7,087 00	16,799 00
1869...	A. D. Hamrick.	A. J. Holmes.	Carlos Dickson.	J. B. Sullivan.	Indianapolis.	7,517 00	28,845 65
1870...	J. D. Williams.	Joseph Poole.	Carlos Dickson.	J. B. Sullivan.	Indianapolis.	7,914 00	19,155 23
1871...	J. D. Williams.	Joseph Poole.	Carlos Dickson.	J. B. Sullivan.	Indianapolis.	8,584 00	20,549 95
1872...	John Sutherland.	Alex. Heron.	Carlos Dickson.	H. W. Caldwell.	Indianapolis.	9,619 20	23,484 35
1873...	John Sutherland.	Alex. Heron.	Carlos Dickson.	H. W. Caldwell.	Indianapolis.	10,784 00	42,369 10
1874...	John Sutherland.	Alex. Heron.	Carlos Dickson.	E. J. Rowland.	Indianapolis.	10,784 00	42,369 10
1875...	William Grim.	Alex. Heron.	Carlos Dickson.	E. J. Rowland.	Indianapolis.	12,063 20	43,214 99
1876...	Resekian Caldwell.	Alex. Heron.	Carlos Dickson.	J. L. Hanna.	Indianapolis.	8,179 30	6,342 70
1877...	Jacob Muts.	Alex. Heron.	Carlos Dickson.	J. W. Furness.	Indianapolis.	6,337 85	14,511 00
1878...	W. E. Seward.	Alex. Heron.	Carlos Dickson.	E. M. Lockhart.	Indianapolis.	5,037 00	15,991 33
1879...	Robert Mitchell.	Alex. Heron.	Carlos Dickson.	E. M. Lockhart.	Indianapolis.	5,472 00	22,919 50
1880...	W. E. Ragan.	Alex. Heron.	J. A. Wildman.	Fielding Beeler.	Indianapolis.	6,553 00	13,809 06
1881...	E. M. Lockhart.	Alex. Heron.	J. A. Wildman.	Fielding Beeler.	Indianapolis.	.....	.....

A. C. Jameison filled the office of Treasurer for 1873, to the 27th of August, 1873, when he resigned, and Carlos Dickson was appointed to fill the unexpired term.

Note.—In consequence of the loss of papers, incident to the military occupancy of the rooms of the State Board of Agriculture, during the late war, and incomplete records preserved, the amount of premiums awarded at the several State Fairs is necessarily incomplete.

LIST OF MEMBERS.

Of the original sixteen corporate members of the Board of Agriculture appointed by the Legislature, but two now survive, as will be seen by referring to the following. (* Represents deceased):

Name.	P. O. Address.	County.	Years of Service Incls'v'e.
*Gov. Jos. A. Wright...	Indianapolis.....	Marion	1851-54
Dr. A. C. Stevenson....	Greencastle	Putnam	1851-54
*Jeremiah McBride.....	.....	Martin.....	1851-52
*Roland Willard.....	.....	Kosciusko.....	1851-52
*Jacob R. Harris .....	.....	Switzerland...	1851-54
*Henry L. Ellsworth....	Lafayette	Tippecanoe ...	1851-52
*John Ratliff.....	Eminence	Morgan.....	1851-52
*Gen. Jos. Orr.....	Laporte.....	Laporte.....	1851-56
David P. Holloway.....	Richmond.....	Wayne	1851-54
*John B. Kelly.....	.....	Warrick.....	1851-54
*Wm. McLain.....	.....	Lawrence.....	1851-52
*Samuel Emerson	Vincennes.....	Knox	1851-52
*John McMahan.....	Salem.....	Washington...	1851-52
*Thos. W. Sweeney.....	Fort Wayne.....	Allen.....	1851-52
*George Brown.....	Shelbyville.....	Shelby	1851-52
*George Hussey.....	.....	Vigo.....	1851-52
*George K. Steele.....	Rockville.....	Parke.....	1852-53
*A. Seward.....	Bloomington.. ..	Monroe	1852-53
*George G. Dunn	Lawrenceburg ..	Dearborn	1852-53
John Levering.....	Lafayette	Tippecanoe ...	1853-54
*Thos. Durham.....	Terre Haute.....	Vigo.....	1853-54
*Jesse Morgan.....	Rushville.....	Rush.....	1853-54
George W. Lane.....	Aurora	Dearborn	1853-53
L. M. Spaulding.....	.....	Lagrange	1853-54
Abraham Smith.....	.....	Knox.....	1854-55
*Samuel Herriott.....	Franklin.....	Johnson.. ..	1854-55
David F. Huffstetter..	Orleans.....	Orange	1854-55
*Joseph Allen	Crawfordsville....	Montgomery..	1854-55
I. D. G. Nelson	Fort Wayne.....	Allen.....	1854-57
*Jas. W. Cockrun.. ..	Oakland	Gibson.....	1854-55
A. J. Hay.....	Charleston.....	Clark.....	1855-56

LIST OF MEMBERS—Continued.

Name.	P. O. Address.	County.	Years of Service Incls've.
*J. P. Drake.....	Indianapolis.....	Marion.....	1855-56
*J. A. Matson.....	Greencastle.....	Putnam.....	1855-56
Wm. T. Dennis.....	Richmond.....	Wayne.....	1855-58
*Geo. D. Wagner.....	Poolsville.....	Warren.....	1855-60
*Maj. Stearns Fisher....	Wabash.....	Wabash.....	1855-66
*Wm. H. Bennett.....	Liberty.....	Union.....	1855-60
*Jas. D. Williams.....	Pond Creek Mills..	Knox.....	1856-71
Col. S. Vawter.....	Vernon.....	Jennings.....	1856-57
Wm. M. Franklin.....	Spencer.....	Owen.....	1856-57
Dr. Rufus Haymond..	Brookville.....	Franklin.....	1856-57
Dr. R. T. Brown.....	Crawfordsville.....	Montgomery..	1856-57
Dr. G. B. Graff.....	Owensville.....	Gibson.....	1856-59
Dr. A. C. Stevenson...	Greencastle.....	Putnam.....	1857-58
Calvin Fletcher, Jr....	Indianapolis.....	Marion.....	1862-63
Jas. L. Bradley.....	Edinburgh.....	Johnson.....	1857-58
*Wm. H. Loomis.....	Indianapolis.....	Marion.....	1858-61
A. Freeman.....	Valparaiso.....	Porter.....	1858-61
*A. E. Vinton.....	Indianapolis.....	Marion.....	1858-59
Thos. H. Collins.....	New Albany.....	Floyd.....	1858-61
*Wm. Miller.....	South Bend.....	St. Joseph.....	1858-61
*Wm. Duncan.....	Bedford.....	Lawrence.....	1858-61
David G. Rabb.....	Rising Sun.....	Ohio.....	1857-60
*W. H. Bonner.....	Spring Hill.....	Decatur.....	1859-60
Wm. G. Coffin.....	Annapolis.....	Parke.....	1859-62
A. D. Hamrick.....	Manhattan.....	Putnam.....	1859-72
*Dr. Jno. C. Helm.....	Muncie.....	Delaware.....	1859-68
*Nathan Piatt.....	Yankeetown.....	Warrick.....	1860-63
Dr. G. W. McConnell..	Angola.....	Steuben.....	1860-61
*D. C. Branham.....	Madison.....	Jefferson.....	1861-62
*Isaac Loder.....	Lewisville.....	Henry.....	1861-64
*Joseph Poole.....	Attica.....	Fountain.....	1861-72
Jno. C. Shoemaker.....	Rome.....	Perry.....	1862-71
*Jno. F. Carr.....	Medora.....	Jackson.....	1862-63
*A. J. Holmes.....	Rochester.....	Fulton.....	1862-69
George Crawford.....	New Durham.....	Laporte.....	1862-63
Hawley Peck.....	Lagrange Center..	Lagrange.....	1862-63
*Samuel Wiley.....	Vevay.....	Switzerland..	1863-64
*W. C. Danaldson.....	Montezuma.....	Parke.....	1863-70
Prof. E. T. Cox.....	New Harmony.....	Posey.....	1864-69
*Maj. John McCrea.....	Bloomington.....	Monroe.....	1864-69
J. A. Grosvenor.....	Indianapolis.....	Marion.....	1864-67
John Sutherland.....	Laporte.....	Laporte.....	1864-....
Dr. G. W. McConnell..	Angola.....	Steuben.....	1864-65
*Prof. S. H. Thompson	Hanover.....	Jefferson.....	1865-66

LIST OF MEMBERS—Continued.

Name.	P. O. Address.	County.	Years of Incls've.
*D. E. Reese.....	Lawrenceburgh...	Dearborn.....	1865-68
J. M. Garr.....	Richmond.....	Wayne.....	1865-66
*Benj. North.....	Rising Sun.....	Ohio.....	1867-72
Alex. Heron.....	Connersville.....	Fayette.....	1867-70
H. Caldwell.....	Wabash.....	Wabash.....	1867-78
Jacob Mutz.....	Edinburg.....	Shelby.....	1868-...
*Thos. V. Mitchell.....	New Salem.....	Rush.....	1869-78
Wm. Crim.....	Anderson.....	Madison.....	†1869-75
L. A. Burke.....	New Harmony.....	Posey.....	1870-74
*Geo. A. Buskirk.....	Bloomington.....	Monroe.....	1870-71
*Thos. Dowling.....	Terre Haute.....	Vigo.....	1871-74
A. B. Claypool.....	Connersville.....	Fayette.....	1871-78
*Stephen Davidson.....	Rochester.....	Fulton.....	1870-77
I. D. G. Nelson.....	Fort Wayne.....	Allen.....	1870-73
*F. Basler.....	Sullivan.....	Sullivan.....	1872-73
F. C. Johnson.....	New Albany.....	Floyd.....	1872-77
W. B. Seward.....	Bloomington.....	Monroe.....	1872-...
J. B. Gerard.....	Aurora.....	Dearborn.....	1873-74
W. H. Ragan.....	Clayton.....	Hendricks.....	1873-....
*H. T. Sample.....	Lafayette.....	Tippecanoe...	1873-80
R. M. Lockhart.....	Waterloo.....	DeKalb.....	1874-....
*J. D. Williams.....	Wheatland.....	Knox.....	†1874-....
Robert Mitchell.....	Princeton.....	Gibson.....	1875-....
J. V. Milhous.....	Butlerville.....	Jennings.....	1875-76
Thomos Nelson.....	Bloomingsdale.....	Parke.....	1875-78
R. P. Haynes.....	Montgomery.....	Daviess.....	1875-....
T. W. Tuttle.....	Muncie.....	Delaware.....	||1876-76
J. W. Coffield.....	Rising Sun.....	Ohio.....	1877-80
Wm. Crim.....	Anderson.....	Madison.....	1877-78
B. H. Hancock.....	Hancock Station..	Harrison.....	1878-...
L. B. Custer.....	Logansport.....	Cass.....	1878-...
S. R. Quick.....	Columbus.....	Bartholomew..	1879-...
Dempsey Seybold.....	Bridgeton.....	Parke.....	1879-80
H. C. Meredith.....	Cambridge City...	Wayne.....	1879-...
John P. Barns.....	Anderson.....	Madison.....	1879-...
John N. Turner.....	Marion.....	Grant.....	1879-80
T. W. W. Sunman.....	Spades.....	Ripley.....	1881-...
Joseph Gilbert.....	Terre Haute.....	Vigo.....	1881-...
J. K. O'Neal.....	Lafayette.....	Tippecanoe...	1881-...
T. M. Kirkpatrick.....	Kokomo.....	Howard.....	1881-...

† Resigned.

|| Filled unexpired term of Mr. Crimf.

METEOROLOGICAL TABLE.

Table Showing Monthly Mean of Barometer, Thermometer and Relative Humidity; Maximum and Minimum Temperatures; Prevailing Direction of Wind; Total Number of Miles Traveled by Wind; Number of Clear, Fair, Cloudy and Rainy Days; and Total Rainfall, at Indianapolis, Ind., for Each Month of the Year 1880, as recorded at the United States Signal Office.

1880, Months.	Mean Barometer.	Mean Thermometer.	Mean Relative Hu- midity.	Maximum Tempera- ture.	Minimum Tempera- ture.	Prevailing Direction of Wind.	Total No. of Miles Traveled by Wind.	No. of Clear Days.	No. of Fair Days.	No. of Cloudy Days.	No. of Days on which Rain or Snow Fell.	Total Am't. of Rain or Snow Fall.
	Inches.	Deg.	Per ct.	Deg.	Deg.		Miles p. hour					Inch
January.....	30.026	45.7	71.2	66	20	SE	51.08	7	9	15	17	6.32
February.....	30.049	39.0	61.5	65	14	S	56.76	9	9	11	13	3.16
March.....	30.059	42.0	61.6	70	21	NW	54.59	9	8	14	15	4.03
April.....	29.946	55.5	57.5	83	27	S	62.12	7	17	6	11	6.43
May.....	29.974	69.1	59.7	85	40	S	46.24	11	14	6	10	8.22
June.....	29.947	74.1	69.4	91	54	S	40.46	5	15	10	12	8.48
July.....	29.957	76.6	67.0	93.5	55	SW	33.44	12	16	3	6	2.26
August.....	29.976	76.2	67.6	94	51	S	34.64	14	14	3	12	2.67
September.....	30.033	65.1	62.2	89	41	N	41.23	7	16	7	10	1.86
October.....	30.062	53.3	65.0	78	31	S	45.64	10	12	9	13	3.54
November.....	30.207	31.7	67.6	63	-5	W	43.38	9	5	16	17	2.58
December.....	30.124	24.3	71.8	56	-13	W	47.03	6	10	15	12	1.44
Means and Totals for the Year.	30.030	54.4	65.4	.....	.....	S	55.661	106	145	115	148	50.99

NOTE.—Days on which the entire number of fourths of clouds observed at 7 A. M., 2 P. M., and 9 P. M., was three, or less than three-fourths, were recorded as clear days.

OTTO SCHÜTZE,

Obs. Serg't Sig. Ser. U. S. A.

METEOROLOGICAL TABLE.

Table Showing Daily and Monthly Means in English inches of Barometer, Corrected for Temperature and Elevation, at Indianapolis, Ind., for Each Day and Month of the Year 1880, as Recorded at the United States Signal Office:

DAILY MEAN BAROMETER.

MONTHS.												
Date, 1880.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	30.234	30.346	30.195	30.024	30.155	30.069	29.883	30.019	29.809	30.097	30.086	29.940
2	30.301	29.997	30.250	29.808	30.028	30.116	29.843	29.931	29.774	29.997	30.036	30.309
3	30.145	29.636	29.668	29.554	30.060	30.122	29.933	30.040	29.854	29.910	29.977	30.109
4	30.194	30.144	29.609	29.742	29.935	29.967	29.892	30.128	29.861	30.079	29.680	29.567
5	30.065	30.241	29.901	29.897	29.919	29.716	29.857	30.154	29.985	29.963	30.061	29.856
6	30.085	30.307	30.131	30.098	29.881	29.671	29.959	30.137	29.988	30.108	29.867	29.266
7	30.166	30.658	30.069	30.350	29.881	29.947	30.008	30.165	30.080	30.112	30.035	30.247
8	29.912	30.232	30.143	30.288	29.786	29.918	29.945	30.073	30.112	30.035	29.985	30.395
9	29.863	30.286	30.023	29.971	29.826	29.847	29.961	29.921	30.134	30.056	30.082	30.670
10	30.029	30.114	30.080	29.909	29.911	29.958	29.933	29.882	30.249	30.094	29.699	30.444
11	29.958	29.747	30.212	30.293	30.150	30.006	29.969	29.988	30.138	30.150	30.079	30.092
12	30.442	29.706	30.275	30.311	30.096	29.920	29.890	30.142	30.101	30.283	30.447	29.707
13	30.402	29.674	30.195	29.897	30.096	29.858	29.971	30.063	30.097	30.191	30.436	29.713
14	30.130	30.048	29.778	29.763	30.277	29.636	29.906	29.896	30.123	29.889	30.313	29.729
15	30.159	30.143	30.118	29.848	30.309	29.861	29.809	29.963	30.023	29.716	29.872	29.802
16	29.930	30.140	30.113	29.722	30.237	30.113	29.826	30.167	29.963	29.781	30.312	29.589
17	29.591	30.028	30.310	30.017	30.047	30.174	29.937	30.068	30.000	30.048	30.504	29.873
18	29.975	30.290	29.853	29.641	29.910	30.203	29.931	29.939	29.992	29.887	30.510	30.140
19	29.723	30.690	29.947	29.857	29.868	30.165	29.811	29.764	29.966	30.308	30.199	30.811
20	29.797	30.208	30.141	30.145	29.866	30.099	30.014	29.708	30.125	30.119	30.159	30.072
21	29.582	29.957	30.235	30.041	29.776	30.001	30.094	29.817	30.178	30.107	30.697	30.203
22	29.665	29.768	30.069	29.800	29.972	29.945	30.042	29.912	30.213	29.999	30.745	30.836
23	29.914	30.102	30.090	29.638	29.990	29.926	30.019	29.991	30.135	30.139	30.678	30.235
24	30.062	29.822	30.369	29.733	29.971	29.860	30.035	29.952	30.061	30.863	30.431	30.251
25	29.994	29.578	30.235	29.743	29.898	29.838	29.974	29.941	29.952	29.977	30.410	30.124
26	29.836	29.797	29.810	29.945	29.948	29.910	29.968	29.908	29.853	29.944	30.761	30.168
27	29.778	29.899	29.817	30.217	29.927	29.843	30.089	29.910	29.959	30.188	30.298	30.175
28	30.264	29.752	29.817	30.134	30.001	29.811	30.067	29.962	29.887	30.106	30.081	30.219
29	30.215	30.162	30.197	29.876	29.673	29.920	30.021	29.972	30.098	29.908	30.387	30.180
30	30.065	.....	30.269	30.270	29.734	29.987	30.015	29.915	30.200	29.878	29.932	30.269
31	30.197	.....	30.032	.....	29.945	.....	30.031	29.853	.....	30.109	.....	30.352

MONTHLY MEAN BAROMETER.

30.026	30.049	30.059	29.946	29.974	29.947	29.957	29.976	30.033	30.062	30.307	30.124
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Highest barometer during year, 30.823 English inches.

Lowest barometer during year, 29.126 English inches.

Annual mean barometer, 30.030 English inches.

OTTO SCHÜTZE,

Obs. Serg't Sig. Service, U. S. A.

METEOROLOGICAL TABLE.

Table Showing Daily and Monthly Mean Temperature at Indianapolis, Ind., for Each Day and Month During the Year 1880, as Recorded at the United States Signal Office.

DAILY MEAN THERMOMETER.

Date.	Months.—Degrees Fahrenheit.											
	Jan.	Feb.	Mar.	April	May.	June.	July	Aug	Sept.	Oct.	Nov.	Dec.
1st.....	39.5	23.0	35.5	53.3	57.7	61.5	72.2	76.7	81.7	62.5	44.7	35.2
2d.....	49.7	26.3	45.5	60.2	64.5	65.7	73.3	70.2	76.0	67.2	52.7	27.2
3d.....	59.7	25.7	56.0	65.5	66.5	68.7	76.7	63.5	79.0	62.5	53.7	33.0
4th.....	56.2	21.7	62.0	61.2	68.2	69.0	79.5	66.7	76.0	53.1	57.0	44.0
5th.....	56.2	30.7	46.2	60.9	71.2	76.5	75.1	71.7	75.0	58.7	44.0	30.2
6th.....	67.0	35.0	45.7	45.6	73.7	69.2	75.7	73.5	74.0	54.7	33.9	13.2
7th.....	53.5	29.2	43.5	39.6	76.5	70.7	78.2	75.0	61.5	53.9	40.2	13.6
8th.....	57.5	40.2	37.7	43.6	78.5	73.7	80.0	75.2	66.0	61.2	46.7	9.6
9th.....	50.2	34.0	38.5	51.5	67.7	73.2	77.0	76.5	67.7	65.9	51.2	10.0
10th.....	46.0	43.0	34.7	43.2	69.0	82.2	80.7	77.0	62.2	68.7	51.4	15.5
11th.....	51.0	50.7	39.2	35.0	66.5	83.7	84.0	74.2	67.0	70.0	43.4	30.4
12th.....	33.3	51.5	29.0	44.5	68.7	84.0	86.0	73.0	65.5	58.1	37.0	36.9
13th.....	30.2	33.0	35.5	62.0	64.5	76.7	86.7	76.3	66.0	56.2	38.6	40.9
14th.....	37.5	30.1	32.0	69.0	61.0	76.7	84.7	77.7	55.0	64.5	27.0	40.7
15th.....	39.7	35.5	33.0	64.2	63.5	63.0	81.0	74.5	61.5	64.1	28.1	40.0
16th.....	49.5	47.5	39.7	52.5	67.2	70.0	75.7	74.7	68.0	47.9	26.2	31.2
17th.....	49.0	55.7	39.5	53.2	72.7	72.2	73.3	78.2	69.2	39.1	15.0	29.9
18th.....	49.2	33.5	47.5	72.5	75.2	74.2	76.7	82.2	72.2	36.7	12.0	29.6
19th.....	53.0	24.5	42.2	53.2	77.0	74.5	69.5	84.5	69.5	38.5	16.4	21.6
20th.....	44.3	33.7	42.2	55.7	68.2	77.2	64.5	77.0	62.5	51.5	21.7	29.4
21st.....	47.5	37.5	43.0	62.7	68.5	77.5	67.5	73.2	60.7	56.1	7.0	33.0
22d.....	36.5	48.0	48.0	68.6	67.5	79.5	69.5	74.7	59.0	44.5	10.5	31.5
23d.....	37.5	41.2	45.7	61.0	72.7	81.2	73.2	77.2	63.6	37.1	16.2	29.6
24th.....	40.5	54.0	38.2	59.5	77.2	79.3	76.0	82.5	69.2	40.6	26.2	29.4
25th.....	42.2	56.2	35.7	62.2	75.2	76.2	77.7	80.7	69.1	56.1	20.7	26.6
26th.....	46.0	56.2	48.0	53.0	74.5	76.5	80.2	81.7	65.5	49.2	23.7	29.0
27th.....	51.2	57.0	48.2	53.2	71.5	76.7	77.2	76.5	55.9	43.7	25.2	—1.6
28th.....	37.2	50.0	41.5	67.7	68.0	73.7	75.2	78.5	59.4	44.2	33.2	—8.2
29th.....	38.7	26.5	44.7	54.0	66.5	66.5	74.2	77.5	62.5	55.5	20.7	—8.2
30th.....	46.0	.....	47.7	48.5	63.7	73.7	74.7	77.5	54.0	48.5	27.0	4.1
31st.....	31.2	.....	53.8	.....	67.5	.....	80.0	81.0	.....	44.7	.....	8.2
Mon'tly Mean Temperature	45.7	39.0	42.0	55.5	69.1	74.1	76.6	76.2	65.1	53.3	31.7	24.3

Highest temperature during year..... 94°

Lowest temperature during year..... —13°

Annual mean temperature..... 54.4°

OTTO SCHÜTZE

Obs. Serg't Sig. Ser. U. S. A.

METEOROLOGICAL TABLE.

Table Showing Monthly Mean Barometer and Thermometer and Total Amount of Snow or Rainfall, at Indianapolis, Ind., for Each Month of the Year, from 1871 to 1880, Inclusive, as Recorded at the United States Signal Office.

Monthly Mean Barometer—English Inches.

Months.	Years.									
	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
January.....	30.130	30.066	30.120	30.232	30.107	30.160	30.022	30.151	30.028	
February.....	30.008	30.044	30.063	30.129	30.070	30.156	29.917	30.112	30.049	
March.....	29.906	30.043	30.080	30.044	29.999	29.982	30.013	29.912	30.073	30.069
April.....	29.801	29.960	29.896	30.016	29.964	29.978	29.898	29.746	29.969	29.946
May.....	29.941	29.988	29.896	29.940	29.922	29.963	29.992	29.904	29.961	29.974
June.....	29.851	29.976	29.905	29.985	29.948	29.881	29.907	29.896	29.954	29.947
July.....	29.957	29.964	29.982	29.964	29.935	29.957	29.931	29.912	29.927	29.957
August.....	29.933	30.032	30.013	29.952	29.945	30.001	29.926	29.876	29.951	29.976
September.....	30.105	29.997	30.082	30.020	30.020	29.954	29.997	30.060	30.081	30.033
October.....	30.063	30.095	30.062	30.093	29.999	29.972	29.963	30.028	30.108	30.062
November.....	30.065	30.112	30.010	30.116	30.037	29.990	30.038	30.010	30.078	30.207
December.....	30.111	30.218	30.125	30.185	29.936	30.109	30.097	30.062	30.080	30.124

Monthly Mean Thermometer—Degrees Fahr.

January.....	26.0	25.0	35.6	20.5	39.1	28.1	34.7	26.9	45.7	
February.....	30.0	30.4	36.0	21.6	37.3	39.5	39.5	30.4	39.0	
March.....	48.0	35.0	38.5	42.2	37.3	37.7	36.5	50.3	42.7	42.0
April.....	58.0	55.0	50.3	45.6	49.7	53.0	51.1	58.8	53.1	55.5
May.....	68.0	64.0	64.0	66.2	62.6	66.0	62.3	61.9	66.7	69.1
June.....	76.0	74.0	77.0	77.4	70.8	72.1	71.7	69.8	71.4	74.1
July.....	75.0	78.0	75.5	78.5	75.9	78.0	76.1	79.6	80.0	76.6
August.....	76.0	76.0	75.0	75.9	70.3	75.1	73.5	75.7	70.3	76.2
September.....	63.0	67.0	64.0	69.6	63.4	64.6	66.5	67.1	62.7	65.1
October.....	58.0	64.0	51.0	55.5	51.4	51.7	58.6	64.2	62.6	53.3
November.....	39.0	36.0	37.5	42.4	40.5	41.3	43.1	45.2	45.8	31.7
December.....	28.0	24.4	37.6	35.6	41.5	22.6	46.8	27.0	35.9	24.3

Total Rainfall—Inches.

January.....	1.17	4.50	3.75	1.01	5.94	1.56	2.38	1.47	6.32	
February.....	1.41	2.85	4.17	1.88	4.49	1.21	2.10	2.17	8.16	
March.....	3.98	1.31	3.48	5.79	6.23	7.44	5.28	1.23	3.36	4.03
April.....	1.87	3.26	5.91	4.12	1.29	2.27	3.11	5.51	2.25	6.43
May.....	1.59	3.22	3.89	4.03	5.13	6.11	2.09	3.24	3.88	8.22
June.....	2.51	3.28	3.70	5.25	12.20	7.54	6.21	2.25	2.94	8.43
July.....	5.60	10.95	11.28	3.53	13.12	7.48	4.19	4.54	2.40	2.26
August.....	3.69	2.69	1.32	2.90	3.66	5.86	4.13	2.42	5.71	2.67
September.....	4.89	2.81	1.76	4.09	1.34	3.85	2.04	3.35	6.94	1.86
October.....	1.54	1.07	5.27	0.36	2.67	4.42	3.22	4.78	1.34	3.54
November.....	3.52	0.80	2.46	4.82	3.04	2.26	3.64	2.87	5.82	2.58
December.....	2.39	2.10	5.90	2.79	4.01	0.90	2.45	3.95	5.10	1.44

OTTO SCHÜTZE,

Obs. Serg't Sig. Service, U. S. A.

METEOROLOGICAL TABLE.

Table Showing Annual Mean Barometer, Thermometer, and Relative Humidity; Maximum and Minimum Temperatures; Prevailing Direction of Wind; Total Number of Miles Traveled by Wind; Number of Days on which Rain or Snow Fell; and Total Amount of Snow or Rainfall at Indianapolis, Ind., for Each Year of the Decade, Ending December 31, 1880, as Recorded at the United States Signal Office.

Year.	Annual Mean Barometer.	Annual Mean Thermometer.	Annual Mean Relative Humidity.	Maximum Temperature During Year.	Minimum Temperature During Year.	Prevailing Direction of Wind During Year.	Total No. of Miles Traveled by Wind During Year.	No. of Days on which Rain or Snow Fell.	Total Am't of Rain and Snow During Year.
	Inches.	Degrees	Percent						Inch.
1871.....	29.972	55.0	.....	97	-3	SW	.....	.....	31.53
1872.....	30.044	50.8	.....	96	-11	SW	52,273	.....	34.07
1873.....	30.004	52.0	.....	95	-13	SW	53,764	156	52.32
1874.....	30.037	55.0	63.0	97	-2	NW	50,598	134	43.60
1875.....	30.005	50.5	66.1	92	-18.5	W	55,888	166	54.58
1876.....	29.967	53.2	68.1	94	-15	W	50,887	179	56.56
1877.....	30.008	54.0	67.2	90	-11	SW	42,937	162	39.08
1878.....	29.946	55.4	64.6	96	-12	SE	49,875	185	38.62
1879.....	30.036	53.9	61.4	96	-22	S	45,511	148	42.88
1880.....	30.030	54.4	65.4	94	-13	W	55,661	148	50.99

Mean Barometer for the Decade, 30.002 English inches.

Mean Thermometer for the Decade, 53.2° (Fahr.)

Highest Temperature observed during decade, 97°.

Lowest Temperature observed during Decade, -22.

Hottest Day during the Decade, July 11, 1879—Daily Mean Temperature, 89.2.

Coldest Day during the Decade, December 29, 1880—Daily Mean Temperature, -8.2.

OTTO SCHÜTZE,

Obs. Serg't Sig. Ser. U. S. A.

NOTE.—° means for ten months.

Examined at the office of the Chief Signal Officer, April 29, 1881.

STATE BOARD MEETINGS.

AGRICULTURAL ROOMS,
JANUARY 8, 1880, 10 O'CLOCK.

Agreeable to call, at the close of the Delegate Board Meeting the Board met, with President Mitchell in the chair, all the members being present.

The minutes of yesterday's proceedings, also all the records of proceedings during State Fair week, were approved and adopted as corrected.

Mr. Sutherland moved that the time for the State Fair of 1880 be fixed for the week commencing September 27th.

Mr. Mutz referred to the suggestion by the ladies that the fair commence the middle of the week, and close the middle of the week following.

Mr. Ragan said an examination of the proceedings of the Board in past years showed that the fair had been held on the week as suggested for many years past.

President Mitchell said the Illinois State Fair wanted to claim our time, and have us change that they might visit our fair.

Mr. Sample regretted very much to conflict with the Illinois fair, as he knew of considerable stock that would be at the Indiana fair if the time was not the same as in Illinois.

Mr. Seybold corroborated this statement.

Mr. Sutherland stated that if our fair was one week earlier we would be in the equinoxial storms.

Messrs. Custer, Meredith, Ragan and Seward expressed themselves in favor of the date mentioned.

The motion carried, and notice for time of fair ordered to be sent to adjoining States without delay.

On motion of Mr. Barns the financial report of the General Superintendent was read and referred to the finance committee, Mr. Lockhart explaining that he had an understanding a year since that all financial transactions went on the books of the Secretary and Treasurer, therefore he did not itemize this report in particulars.

Mr. Ragan, under the head of unfinished business, reported that Mr. Albert Gall had made complaint in regard to issuing two diplomas for display of carpets, etc., at the last State Fair.

President Mitchell explained that the mistake was in having a special committee to pass on and award premiums in that department.

Mr. Seward said it was an unfortunate affair, and the mistake was in the committee on special merits recommending diplomas or making any choice.

The Secretary read the resolution authorizing the special committee; also the wording of the two diplomas referred to, and showed that the two diplomas did not conflict in fact, as one was to Mr. Gall for "the greatest variety," and the other to A. L. Wright for "the largest and finest exhibition" of carpets, rugs, etc.

Motion of Mr. Seward carried. That in order to give expression on the subject the regular committee on general merits had no authority to make awards to competitive exhibitors.

Upon motion, the minutes as above were approved.

The Board adjourned *sine die*.

ORGANIZATION OF THE NEW BOARD.

AGRICULTURAL ROOMS, JANUARY 8, 1880.

Agreeable to notice on adjournment of the old Board, the recently elected members met for organization.

On motion, Mr. Mitchell presided.

The roll being called, all the members responded as follows: Robert Mitchell, R. P. Haynes, B. H. Hancock, W. B. Seward, J. W. Cofield, S. R. Quick, Jacob Mutz, Dempsey Seybold, W. H. Ragan, H. C. Meredith, J. P. Barns, H. T. Sample, J. N. Turner, L. B. Custer, John Sutherland and R. M. Lockhart.

On motion, the Board proceeded to the election of officers for the ensuing year, resulting as follows:

President.....W. H. Ragan, of Hendricks county.

Vice President.....H. T. Sample, of Tippecanoe county.

Secretary.....Alex. Heron, of Marion county.

Treasurer.....J. A. Wildman, of Marion county.

General Superintendent.....Fielding Beeler, of Marion county.

Executive Committee.

Jacob Mutz, of Shelby county.

Wm. B. Seward, of Monroe county.

John P. Barns, of Madison county.

H. C. Meredith, of Wayne county.

Mr. Mutz and Seward were selected to conduct the new President to the chair, which was done with the usual courtesy, being a pleasant duty for all parties.

Mr. Ragan, in a few brief remarks, acknowledged the honor conferred, and expressed his embarrassment in the attempt to fill the position so ably filled by his predecessors.

Motion of Mr. Lockhart carried, that the salaries of the officers be fixed the same as last year, 1879.

Motion of Mr. Seward carried, that the next meeting of the Board be set for the 17th day of February, at 10 o'clock A. M.

On motion all unfinished business was referred to the Executive Committee.

Adjourned.

EXECUTIVE COMMITTEE MEETING.

AGRICULTURAL ROOMS, JANUARY 9, 1880.

Agreeable to call of the President, the Executive Committee met, with President Ragan in the chair. Present—Messrs. Mutz, Seward, Barns and Meredith.

On motion, the report of the special committee on the geological department, as reported to the delegate board, was adopted, and Prof. Collett instructed to put the department in order, including the Owen Cabinet and Ornithological Case in the agricultural rooms, using his discretion and judgment consistent with economy.

James A. Wildman, Treasurer elect, presented his bond in the sum of \$40,000, properly drawn and acknowledged by a notary, and signed by four good and acceptable sureties, which was duly accepted and placed on file in the office safe.

The following order was given by President Ragan to Treasurer Wildman, dated January 9, 1880:

CARLOS DICKSON—*Dear Sir:*—On the 8th of January, James A. Wildman, was duly elected Treasurer of the State Board of Agriculture for one year from this day, and has been duly qualified. You are hereby directed and ordered to pay over to the said James A. Wildman, as your successor, the sum of twelve thousand five hundred and ninety-eight dollars and eighty-nine cents in your hands belonging to said Board. Also the sum of two thousand nine hundred and sixty-three dollars and sixty-four cents belonging to the geological fund in said Board's hands.

\$12,598.89

2,963.64

\$15,562.53

W. H. RAGAN,

President Indiana State Board of Agriculture.

Attest:

ALEX. HERON, *Secretary.*

On the back of the order, of which the above is a copy, is a receipt for the full amount, \$15,562.53, signed by J. A. Wildman, Treasurer, and the document placed in care of the Secretary of the Board.

The following resolution, offered by Mr. Seward, was adopted :

Resolved, That the Treasurer, James A. Wildman, be and is hereby instructed to invest in government 4 per cent bonds at the lowest premium possible, ten thousand dollars [\$10,000], and hold the same subject to the order of this Board, said investment to be made on, or about the 15th inst.

Ordered, That the Secretary of the Board be authorized to insert advertisements in the premium list for the State Fair of 1880 on condition to furnish the usual number of copies in pamphlet form for distribution.

Adjourned.

FEBRUARY MEETING, 1880.

TUESDAY, FEBRUARY 17, 10 O'CLOCK A. M.

The Board met pursuant to adjournment, President Ragan in the chair. All the members answered to their names as follows:

Messrs. Robert Mitchell, R. P. Haynes, B. H. Hancock, W. B. Seward, J. W. Cofield, S. R. Quick, Jacob Mutz, Dempsey Seybold, H. C. Meredith, J. P. Barns, H. T. Sample, J. N. Turner, L. B. Custer, John Sutherland and R. M. Lockhart.

Minutes of the last meeting read and approved.

A communication from F. L. Dougherty, Secretary of the Indiana Bee-Keepers' Association, was read, and upon motion, referred to the committee on premium list.

A committee of ladies representing the Woman's State Industrial Association, being present, a time for conference committee meeting was fixed for to-morrow, 10 o'clock A. M.

The Board then proceeded to consider claims on file.

On motion of Mr. Sutherland, a committee consisting of Messrs. Seward, Mutz and Mitchell, was appointed to consider the expediency of providing for a practical trial of plows and harvesters the coming season, and requested to report to-morrow.

An expression of the Board was requested with regard to national legislation in the interest of agriculture, with a

view of unity of action among the States to prevent the spread of contagious diseases among live stock ; the possibilities of manufacturing sugar, from beets, sorghum and corn ; the successful cultivation of tea and coffee ; and to further these ends, the practicability of making the Commissioner of Agriculture, a cabinet officer. A random discussion followed by Messrs. Meredith, Lockhart, Mutz and Haynes. Upon motion the subject was laid on the table.

Upon motion recess was taken until 2 P. M.

AFTERNOON SESSION.

TWO O'CLOCK.

A communication from Dr. Ellis, was read, setting forth the insufficiency of the building allotted for the exhibition of last season's poultry show.

On motion of Mr. Haynes, the matter was referred to the Executive Committee and General Superintendent.

President Ragan called the attention of the Board to an order passed several years ago restricting an exhibitor from again competing for premiums at State Fairs, on account of some informalities and indiscretion, which were recorded at the time, and stated that such exhibitor, Mr. John Marvel, was present ; that he had been punished severely, was now penitent, and requested to be again allowed the privilege of competing for State Fair premiums.

Motion of Mr. Mitchell carried, that the restrictions which debarred John Marvel from competing for State Fair premiums, as recorded on page 136, Record C, be annulled and removed.

The question whether the long-continued use of that part of the fair grounds south of the enclosure as a public highway, will not involve a forfeiture of the same to the public, being under discussion, on motion of Mr. Barns the subject was referred to the Executive Committee.

An application of the Tile Makers' Association, by Mr. Billingsly, for adequate space to show their work, was upon motion of Mr. Sample, referred to the General Superintendent.

The President announced the standing committees and department superintendents as follows :

STANDING COMMITTEES:

Finance	Messrs. Mitchell, Sutherland and Turner.
Rules and Regulations...	Messrs. Mutz, Meredith and Seybold.
Fair Grounds.....	Messrs. Quick, Custer and Barns.
Premium List.....	Messrs. Meredith, Sutherland and Hancock.
Unfinished Business.....	Messrs. Lockhart, Haynes and Seward.
Geology and Statistics...	Messrs. Seward, Mutz and Cofield.

DEPARTMENT SUPERINTENDENTS.

Horses.....	H. C. Meredith.
Cattle	Robert Mitchell.
Hogs.....	Dempsey Seybold.
Sheep.....	S. R. Quick.
Poultry.....	B. H. Hancock.
Agricultural	J. W. Cofield.
Mechanical	R. M. Lockhart.
Carriages and Furniture.....	J. N. Turner.
Horticultural.....	L. B. Custer.
Engines and Machinery.....	W. B. Seward.
Educational and Art.....	John Sutherland and J. A. Wildman.
Natural History.....	Prof. John Collett.
Amphitheater.....	R. P. Haynes.
Permits.....	Jacob Mutz.
Gates.....	John P. Barns.

After the announcement of the standing committees, President Ragan read a special message to the Board, which, on motion, was ordered to be placed on file and made part of the record :

ADDRESS.

I am aware that what I may say at this time by way of suggestions may be considered as an innovation upon former customs, yet I feel that the beginning of the work, rather than at its close, is the proper time for us to counsel together as to the policy best to pursue.

This is really the business meeting of the year. At the January meeting we simply close up the accounts of the past, and set forth, under a new organization, for a sail upon the unknown sea of the future. Here we halt to take on a pilot and the necessary instruments to guide us through.

A few moments, therefore, devoted to the study of the chart will prove of benefit to us, as, in the event of a storm, each individual member may then be relied upon for efficient service.

Storms are of no unfrequent occurrence upon the waters we navigate, and the voyage we are now upon, without the aid of a Professor Tice, may be safely reckoned as one in which the rule will most certainly prevail.

What may we do, therefore, to avert the dangers that beset us, and insure a safe and triumphal entry into port?

The trust reposing in us is no sinecure. To aid, to encourage, to build up, to educate, should be our motto. Such is the trust imposed in us. It is an honor not to be despised, yet the labors necessary to success are indeed onerous. The master is inexorable. No shortcomings on our part will be excusable, no failures tolerated. Like all public servants we have been, and will continue to be, the subjects of sharp criticism. Many mistakes have doubtless been made, and much that should have been done has been neglected. In the midst of embarrassments such as have beset us, we have sometimes thought our treatment unduly severe. But these are now amongst the things of the past. Times are greatly improved. People are no longer constantly in dread of some great financial calamity, that haunts their thoughts by day and their dreams by night. It is true many have gone down to be known no more in financial circles, but others, with a zeal and enthusiasm that knows no failure, have arisen to take their places. In such we have new friends, those that would gladly see us prosper, and that recognize in our works true merit. Let us profit by the experiences of the past, and strive to so conduct ourselves as to continue to merit the approval and patronage of such. This desirable result can only be reached through a faithful performance on our part of the full duties of our organization. Each individual member should strive

to do his whole duty. We should not be content with the ordinary routine work, such as we have enacted and re-enacted, year after year, for over a fourth of a century. We should be progressive, not content simply with following. We should lead in all laudable work. Let us break our stereotype plates, and set up a new form. Although on the upgrade of progress, we are yet encompassed with many embarrassing circumstances, mainly the result of the fiery ordeal through which we have so recently passed. Perhaps the greatest of these is the lack of co-operation upon the part of citizens of Indianapolis. It is needless to attempt to disguise the facts, or to try to ignore the ill-will of this class. Our interests are mutual. While we can not succeed without their assistance and co-operation, they may get along tolerably well without us. It behooves us, therefore, to renew our pledge of fidelity to them, and to ask in return a guarantee of co-operation. Every business man in Indianapolis should be made to feel that he had a common interest in our welfare. Then let this same pledge extend out from the citizens of Indianapolis to the citizens of the whole State. Let us convince them that we are the worthy servants of the agricultural, mechanical and the household interests of the people of the whole State; that whatever they would have us do to best develop their interests we stand ready and willing—more! we are anxious to do. Through this course, and this only, can we rise above the embarrassments that now beset us, and start out again on the high road to prosperity. It rests with us to turn the wheels of progress. We may look to the next General Assembly until our heads are silvered by the frosts of many winters—we may succeed in perpetuating ourselves in the harness of office; yet, like the unworthy descendant, who anxiously awaits the death of a rich uncle, we ourselves will merit the stigma of failure, and the rich uncle may decide to make other disposition of his fortune. We should take hold of this work with a vim and a will; we should take hold of it as individuals interested only in the success thereof; we should take hold of it in our official capacity as the Indiana State Board of Agriculture, determined to foster every interest represented in this broad title. Then we may hope to succeed, and then only. Then will the relief come. It will come in the conscious thought of our having done our whole duty. In conclusion, let me beseech you, each and all, start out from this meeting with a renewed determination to labor earnestly and faithfully to make the fair of 1880 the best known to the history of the board. Each one of you has in charge a department or subdivision of the exhibition. Devote yourselves especially to the success of your individual departments, but allow no opportunity to pass when you may say a word or per-

form a deed that will inure to the credit of the whole. Return to your respective homes, to the counties constituting your districts, determined to look up, and bring out the rich resources thereof. There is not a district, not a county, in our State—one of the best in the Union—that does not contain valuable agricultural, mechanical, and other industrial interests of vast importance that should be hunted up and brought into the greatest harvest in which we are engaged. It is our duty to mature those interests, to assist in developing them, to bring them together annually that others may see and learn for themselves the vastness of our national resources, and to be profited thereby. Look after these interests. Speak a good word wherever and whenever you can, and my word for it our efforts will be crowned by the coveted plaudit, "Well done good and faithful."

Mr. Seward moved that the same amount be appropriated for premiums as was appropriated for the last exhibition. After considerable discussion by Messrs. Barns, Seward, Meredith, Quick, Mitchell, Mutz, Heron, Lockhart, Sutherland, Haynes and Ragan, the motion was adopted by one majority.

Mr. Mutz moved to take up the Rules and Regulations, and adopt the suggestions of the Delegate Board so far as they would apply. Carried.

Rule 2 was amended to read "day tickets" instead of "Exhibition season ticket."

Rule 3 amended to require all entries to close Tuesday noon, the second day of the Fair.

After prolonged discussion, with regard to the sale of privileges—the printing and disposition of tickets to exhibitors, in which nearly all the members took part, the Board adjourned, to meet at 8:30 to-morrow morning.

SECOND DAY.

MORNING SESSION.

WEDNESDAY, FEBRUARY 18, 9 O'CLOCK.

The Board met agreeable to adjournment, President Ragan in the chair. All the members present except Mr. Seward.

The minutes of yesterday's proceedings were read, corrected and adopted. .

On motion of Mr. Sutherland, the action on Rule 2 was reconsidered.

The distribution of tickets to renters of stands and others, was discussed by Messrs. Ragan, Sample, Quick, Mitchell, Meredith and Governor Williams; and,

Upon motion of Mr. Lockhart, the whole subject, including the revision of Rules 2 and 9, was referred to a committee consisting of Messrs. Lockhart, Meredith and Ragan.

Mr. Sample being in the chair, the other rules consecutively, and the instructions to the judges, were taken in order, and the rules of 1879 were adopted as amended.

Recess taken till 2 o'clock P. M.

AFTERNOON SESSION.

TWO O'CLOCK.

The Board met, with all the members present.

The committee to whom was referred the claim of Enoch Worman for premium on speed (1875), made the following report, reaffirming the former action of the Board in the case:

We, your Committee, after due consideration of all information within our reach, sustain the past action of the Board had at that time, when all the facts were fresh and in possession of the Board.

ROBERT MITCHELL,
JOHN P. BARNES,
JACOB MUTZ,
Committee.

The Committee of Conference, with the committee from the "Woman's Board of Industry," presented the following report, which was accepted :

REPORT OF THE CONFERENCE COMMITTEE.

Your Committee, appointed at the January meeting, to confer with a committee of the "Woman's Board of Industry," with a view of giving to the said Woman's Board the entire control and management of the exhibition at our next State Fair, of the goods in the textile and domestic departments as comprised and shown in books 36 to 45 inclusive, and such other articles as may properly come under their control, and approximating a certain sum of money to be used in paying premiums and other expenses, would respectfully report:

That we have had a joint meeting of the two committees, and after a thorough investigation of the matter, would recommend that the entire control and management of these departments be given to the Board of Directors of the Woman's Board of Industry, and that the sum of one thousand dollars be appropriated for this purpose, to be paid out from time to time, on properly signed vouchers, as other moneys are paid out by the Treasurer of the Board of Agriculture, and that in no event is a greater sum than the one named to be expended or promised to be expended by the said "Woman's Board.

W. B. SEWARD,
JOHN SUTHERLAND,
JACOB MUTZ,
Committee.

The following estimate of expenditures was submitted with the foregoing report, as expenses.

WOMAN'S DEPARTMENT:

1879.		1880.	
Premiums paid.....	\$449	For premiums.....	\$550
Rent show-cases, 150 feet.	59	Rent show-cases.....	100
Awarding committees....	73	Awarding committees....	73
Entry clerk hire.....	13	Entry clerks.....	15
Superintendents and as-		Assistant porter.....	32
sistants.....	32	Repairs and decorating...	25
Salary of Secretary.....	100	Special police and attend-	
Estimated improvements.	100	ants.....	25
Additional estimates for		Salaries, postage and inci-	
. 1880.....	174	dentials.....	180
Total.....	\$1,000	Total.....	\$1,000

On motion, the report was received and adopted unanimously.

On motion of Mr. Seward, it was ordered that the Woman's Board of Industry should select their own disbursing committee, the selection to be confirmed by the State Board of Agriculture. The committee so selected and confirmed was composed of Mesdames Haggart, Adkinson, Noe, Finch and Stowell.

Upon motion, Board adjourned until 8:30 o'clock tomorrow morning.

THIRD DAY.

MORNING SESSION.

THURSDAY, FEBRUARY 19, 8:30 O'CLOCK.

The Board met pursuant to adjournment, President Ragan in the chair. All the members present except Mr. Seward.

The Board proceeded to the classification of exhibits and

fixing the amounts of the various premiums, resulting in the following changes from the list of 1879 :

Book 2. Matches added from book 6.

Book 6. On saddle horses, added from \$10 to \$15, and second premium \$5 to \$8.

Book 7. In herd of six, etc., add the words except heavy draft horses, and added premium for best herd of six, etc., heavy draft horses owned by one exhibitor, same amounts.

Book 8. Leave out premiums for best jack colt, and reduce premium for mule four years old and over \$14 to \$12; second premium, \$7 to \$6. Same changes on mule three years old, under four, and on mule two years old and under three. Add a premium on best mule one year old and under two, \$8; second, \$5.

Book 10. Instead of breeding cattle, insert Short-horns, and all below Herefords transfer to book 11. With a full class for Jerseys, amounting to \$146, and add a premium on Polled Angus bull and cow, first and second, same as on Devons.

Book 12. Second premium on the herd classes left out. Premium on Indiana herd changed from \$25 to \$75, and all relating to herds transferred to book 13; all second premiums on all fatted stock left out.

Book 13. Addition of herds from book 12, as noted.

Book 14. \$20 on sheep added and portioned.

Book 15. \$20 on sheep added and portioned.

Book 16. \$20 on sheep added and portioned.

Book 17. \$20 on sheep added and portioned.

Book 18. \$18 on sheep added and portioned.

Book 19. In the three classes of bucks having five best lambs, advanced from \$10 to \$15.

Book 20. Added for best sow two years old and over, \$12; for second best, \$6. And the same added through books 21, 22 and 23.

Book 24. A sweepstake on large breeds, and the same amount premiums as a sweepstake for small breeds. On best boar, changed from \$20 to \$15. On the best sow, changed from \$20 to \$15, and on the herd, from \$10 to \$25.

Book 28. Added for best collection of Irish potatoes, not less than ten varieties, \$5.

Book 30. All on tobacco left out, and a full list made for butter, cheese and honey, classified to the amount of \$71, and two diplomas.

Books 32 to 35, inclusive. Horticultural Department, \$50 added and referred to State Association to apportion.

Books 36 to 45, inclusive. Textile fabrics, referred to the "Woman's State Board of Industry."

Book 46. Rearranged by request of Prof. Collett. \$67 added, eight diplomas left out, and the collection of pet animals transferred to poultry book.

Book 48. Educational, referred to the Superintendent of that department and President Ragan for verification.

Upon motion, the Board adjourned until 2 o'clock P. M.

AFTERNOON SESSION.

FRIDAY, 2 O'CLOCK.

The Board met, all the members present except Mr. Lockhart.

The revising of the premium list was completed and the list of 1879 adopted as corrected, except Book 5. Speed Class, which was in the hands of a committee for revision, on being called for, they, Messrs. Mitchell, Meredith, Mutz and Seward, were excused to complete their work and report.

Mr. Mutz moved that the allotment of gate keepers for 1880, should remain the same as last year. Mr. Quick moved an amendment to add four men to the number for gate keepers.

Motion as amended adopted.

Motion of Mr. Turner carried, that the President allot to members the appointment of additional gate keepers.

Allotment of gate keepers for 1880 was as follows: Barns 2, Meredith, Seward, Mutz, Custer, Sample and Mitchell, 1 each.

Considerable miscellaneous business was discussed, without definite action, and some committee work not yet reported.

3—AGR. REPORT.

Upon motion, Messrs. Seybold, Hancock and Turner were excused from further attendance.

On motion of Mr. Quick, adjourned until 7:30 P. M.

EVENING SESSION.

FRIDAY, 7.30 O'CLOCK.

The Board met, all the members present except Messrs. Lockhart, Seybold, Hancock and Turner.

Mr. Seward reported from the committee on the proposed trial of plows, etc., as follows, which was accepted :

GENTLEMEN: Your committee appointed to report as to the propriety of this Board having a competitive trial of reapers, mowers, plows, etc., during the coming summer, would report, after due consideration, that we do not think it is expedient to have such a trial during this year.

W. B. SEWARD,
JACOB MUTZ,
ROBERT MITCHELL,
Committee.

Mr. Mitchell, Chairman of the Finance Committee, reported as follows, which was accepted :

We, your committee appointed to adjust the bill presented by Carlos Dickson, Ex-Treasurer of the Board, after due consideration with Mr. Dickson, can not agree or allow the bill as presented, amounting to \$887, for percentage collecting guarantee assessments.

ROBERT MITCHELL,
JOHN SUTHERLAND,
J. N. TURNER,
Committee.

On motion, the Board proceeded to elect a Trustee for Purdue University by ballot, to be confirmed by the Governor.

Messrs. Sutherland and Haynes explained that, in their opinion, the term of only one of the present members would expire next August.

Mr. Sample nominated Mr. Haynes.

Mr. Quick nominated Mr. Mutz.

Before proceeding to ballot, Mr. Haynes gave a brief history of the institution and its workings, and declined to be a candidate against Mr. Mutz.

Mr. Mutz, with a few remarks, withdrew his name.

On the first ballot, Mr. Haynes received eight votes, and Mr. Mutz received three votes.

President Ragan declared R. P. Haynes duly elected such Trustee, to serve until August 25, 1880, hereby confirming all previous actions of such Trustee or Trustees through any irregular action of the Board, or omission of such appointment heretofore.

The committee appointed to revise premium list on speed classes reported as follows, which was accepted :

REPORT OF THE COMMITTEE ON SPEED CLASSES.

We, your committee appointed to make up a premium list on speed for the next State Fair, do recommend that the matter be placed in the hands of the Executive Committee, with instructions to make the sum total \$3,000. We find, on looking about the city, that the hotels will give several hundred dollars, and think that it can be definitely arranged within a few weeks, but that it can not be done at this time.

HENRY C. MEREDITH,
JOHN SUTHERLAND,
ROBERT MITCHELL,
Committee.

On motion of Mr. Mutz, the report was received and concurred in, with the proviso that the Executive Committee should exercise their discretion in executing said instructions as to the amount offered.

Motion of Mr. Mitchell carried, that all unfinished business be referred to the Executive Committee, with authority to act.

On motion of Mr. Mitchell, the Board adjourned to meet on the Fair Grounds, Monday, September 27.

EXECUTIVE COMMITTEE MEETINGS.

MARCH SESSION.

TUESDAY, MARCH 23, 1880.

Agreeably to call of the President, the Executive Committee of the Board of Agriculture met in the office of the Secretary. Present, Messrs. Ragan in the chair, Mutz, Seward, Meredith and Barns.

Minutes of the last two days' Board meetings of the February session read and referred to the next Board meeting.

On motion of Mr. Mutz, the claim for rent against Harry Gilbert for use of the Exposition Hall, was referred to the General Superintendent for settlement.

On motion of Mr. Barns, the premiums offered on honey was made to read, "for best 10 lbs. of honey in packages of one pound or more, \$5; second best, \$2, and the same for extracted honey."

On motion of Mr. Meredith, the large and small breeds of hogs for sweepstakes, were classed as follows:

Large breeds—Poland Chinas, Chester Whites, Jersey Reds, and other large breeds.

Small breeds—Berkshires, Essex, Suffolks, and other small breeds.

Mr. Gallup, President of the Indianapolis Board of Trade, introduced Col. Littler, of Iowa, Secretary of the National Butter, Cheese and Egg Association, who addressed the

committee and gave a statement of the object of the association and their coming meeting at Indianapolis on the 27th and 28th of April next, and invited the co-operation of the Board, which was responded to in a very appreciative manner by President Ragan.

Messrs. Billingsley and Hadley, as a committee from the State Tile-makers Association, by resolution from said association, asked for extended facilities for making a display at the coming State Fair. The request was favorably received and referred to the General Superintendent.

Upon motion, adjourned until 9 o'clock A. M.

SECOND DAY.

WEDNESDAY, MARCH 24, 9 O'CLOCK A. M.

Executive Committee met, agreeably to adjournment.

Present, Messrs. Ragan, Seward, Meredith, Barns and Mutz.

Considerable miscellaneous business was discussed informally and consultation had with the General Superintendent as to repairs and improvements.

The division of stalls and pens to the different breeds of stock was, by consent, referred to the President and General Superintendent.

On motion of Mr. Mutz, the premium list for speed classes, as reported by Messrs. Meredith, Barns and Mutz, apportioning \$2,750 to that class, was accepted and adopted.

On motion, the committee adjourned.

MAY SESSION.

TUESDAY, MAY 25, 1880.

Agreeably to call of the President, the Executive Committee met in the Agricultural Rooms.

Present, Messrs. Rigan, (presiding) Mutz, Barns and Meredith. Mr. Seward absent.

Mr. Quick was present by request, being in attendance at the Cattle Breeders' Convention.

Minutes of the last meeting read and approved.

Propositions from Cincinnati and Chicago, and W. B. Burford, for printing lithograph posters and admission tickets, were read and considered, when, by request, Mr. Burford submitted a sketch for a new poster. After thorough examination, on motion of Mr. Mutz, the sketch and printing of poster were left to the discretion of the President, Secretary and General Superintendent to adopt and contract for the printing of 2,000 lithograph posters.

The proposition of W. B. Burford to print 75,000 lithograph tickets for \$65 was accepted, and H. C. Meredith selected to see such tickets printed and secured against fraud.

Motion carried, that 1,200 complimentary tickets be provided, and twelve sent to each member.

The subject of making an exhibition of grain at the Cincinnati Millers' Exhibition, in June, was considered and referred to the President and Secretary, with power to act at their discretion.

The matter of seating the Exposition Building for conventions and entertainments, after consideration, was referred to the General Superintendent.

Upon motion, the Committee adjourned.

AUGUST SESSION.

FRIDAY, AUGUST 20, 1:30 P. M.

Agreeably to call of the President, the Executive Committee met in the Secretary's office.

Present—Messrs. Ragan in the chair, Mutz and General Superintendent Beeler. Messrs. Seward and Barns absent.

Reading of the minutes of the previous meeting postponed, awaiting the absentees.

A memoranda of business pending read by the Secretary.

Motion of Mr. Ragan carried, that the drive-way across the track between the dwelling house and amphitheater be closed, and a drive-way opened on the west side of the dwelling house. Also, that the area between the exposition hall and the time track be kept clear of vehicles during the week of the State Fair.

Motion of Mr. Mutz carried, that the General Superintendent have a new roof put on the old dining hall.

Motion of Mr. Beeler carried, that the General Superintendent be authorized to rent lumber to cover stalls and pens, at his discretion.

Mr. Meredith reported his visit to the Cleveland, Ohio, races, and failure to arrange with the owners of fast horses for the Indiana State Fair.

Motion of Mr. Mutz carried, that the President superintend the allotment of space in the main building.

Motion carried, that the General Superintendent take the siding off the old Fine Art Hall, known as the Agricultural Implement Hall, or a part of it, at his discretion.

Motion carried, that the General Superintendent build such addition to the poultry house as in his discretion may be needed.

Motion carried, that the General Superintendent be and is hereby authorized to rent the Fair grounds and buildings to the Grand Army of the Republic, 21st, 22d and 23d of September.

On motion, the committee adjourned.

INFORMAL MEETING.

AGRICULTURAL ROOMS, THURSDAY, SEPTEMBER 16, 1880.

There being important business pending, an informal meeting of those connected with the Board that could be reached on short notice was called.

Present, Messrs. Ragan, Seward, Barns, Superintendent Beeler, Treasurer Wildman and Secretary Heron.

Letters were read from Messrs. Meredith and Mitchell, members of the Board, regarding the \$1,000 purse on speed.

Motion carried, that \$500 be offered to the owners of the four pacers known as the "Big Four" to go on Wednesday of the fair. Also, that the proposition of Messrs. Loftus and Chancy, for exhibition of double horseback standing race, one-half mile heats, two in three, each day of the Fair, for \$150, and they pay their own expenses, be accepted.

Adjourned.

STATE BOARD MEETINGS

DURING STATE FAIR.

EXECUTIVE BUILDING, FAIR GROUNDS,
MONDAY, SEPTEMBER 27, 2 P. M.

Board met pursuant to adjournment, President Ragan in the chair. All the members present except W. B. Seward, J. N. Turner and J. Sutherland.

Minutes of the last meetings read and approved. Also, proceedings of the Executive Committee, which, on motion of R. M. Lockhart, were adopted.

The President, Mr. Ragan, delivered the opening address, as follows:

Gentlemen of the Indiana State Board of Agriculture:

We are to-day assembled in obedience to our February adjournment and for the purpose of supervising the affairs of the twenty-eighth annual State Fair now opening.

Each individual member of the Board has an important duty to perform in this connection. No greater duty can rest upon you, at least until your respective departments are fully organized, than your obligations to the exhibitors therein.

Up to the present time the care and comfort of exhibitors in a general way has devolved upon the Superintendent, who has performed well his part. You now come to his relief. From henceforth he will remain subject to your orders, in so far as your departments may require his services.

Since our success depends solely and wholly upon our exhibitors, and since the most liberal policy toward the exhibitor, compatible with the general good, is certainly the policy that must eventually win, I trust that you will at once acquaint yourselves with and pro-

vide for their every want. Of course a reasonable discretion will rest with you in regard to their *real wants*. This will guard you against unreasonable demands.

Let us faithfully comply, or at least make the effort so to do, with our published rules and the demands of justice in our dealing with exhibitors, lessees and visitors. The details of this work rest with you as individual members in charge of your respective departments.

Perhaps the most difficult of execution fairly and impartially, of the rules of the Board is Rule 2, in which it is proposed to admit exhibitors in large numbers of our departments free. Our rule relating to leases is now, for the first time, definitely arranged and easy of execution.

In relation to exhibitors, no definite rule can be made applicable to all. Great discretionary authority must therefore be vested in the Superintendent of permits. It is to be hoped that he may be able, in the discharge of this important, though exceedingly delicate trust, to guard well the interest of the Board, and at the same time provide fairly for the wants of every exhibitor who shall be entitled to the provisions of Rule 2.

There is perhaps very little, if any, legislative business requiring the attention of the Board at this hour, and it is important that each member should be with his exhibitors during the arrangement of their exhibits. I would suggest the propriety of an early adjournment for this purpose.

In conclusion, allow me to congratulate you upon the auspicious promises of a good fair, and to invoke the Divine blessing upon our work now so happily begun.

After making some further remarks, again calling the attention of the members to Rule 2, and requesting their co-operation, Mr. Mutz desired the Superintendents of the various departments to send him proper vouchers by applicants for tickets.

Motion of Mr. Lockhart carried, that the State Board of Agriculture hereby extend to the "old prison soldiers" an invitation to visit the State Fair in a body, on Thursday, September 30, at 2 o'clock P. M.

Mr. Lockhart appointed to extend the invitation.

Notice (unofficial) having been received that the State Board of Agriculture of Ohio would arrive in this city this

evening, Mr. Heron suggested that the President appoint a committee of reception, and that they be offered the freedom of the fair, as the guests of the Board.

Mr. Mitchell seconded the motion, and announced that delegations from associations in Michigan and other States, might also be expected, and moved that the same courtesies be extended to all. Adopted.

Messrs. Mitchell, Lockhart and Meredith appointed such committee.

Motion of Mr. Mitchell carried, that the Board adjourn to 10 o'clock A. M. to-morrow.

SECOND DAY.

MORNING SESSION.

EXPOSITION GROUNDS, TUESDAY, SEPTEMBER 28, 1880.

Board met at 10 A. M., President Ragan in the chair. A quorum being present, the calling of the roll was dispensed with. Minutes of last meeting read, corrected and approved.

President Ragan called attention to the fact that no action had been taken by the Board in regard to its representation as a body at the ceremony of laying the cornerstone of the new State-house, which occurs this day.

Mr. Meredith moved that a committee of five be appointed by the Chair to represent the Board. Amended by consent so as to embrace all members who can attend without neglect of duty, H. T. Sample acting as chairman.

Recess taken until 2 o'clock P. M.

AFTERNOON SESSION.

TWO O'CLOCK.

A quorum being present, President Ragan in the chair, the Board proceeded to appoint various committees, as follows:

On Horses—C. B. Jackson, Nelson Johnson, John Anderson, John Wilson, Dr. C. S. Arthur, G. W. Krugan.

On Hogs—George Sulland, Stephen K. Cofield, Arthur Brooks, Joseph Kale, J. D. Agnew, W. A. Banks, Walter Fagen.

On Cattle—James Robinson, James W. Kay, Geo. W. King, J. B. Gerard.

On Sheep—Jacob H. Hancock, J. M. Cartnell, Hiram Barclow, W. R. Racklidge, Samuel Hewel, Dr. Burrows.

On Agriculture—L. W. Shelton, J. L. Saylor.

On Horticulture—Allen Lloyd, D. E. Huffinan.

On Textile Fabrics—Squire Wells, Chairman; Miss Jennie Patterson, Mrs. Laura McDonald.

On Books, A and B—M. Zeschke, Gustave Bohn.

On Books, E and F—Dr. R. T. Brown, Charles A. Howland.

Adjourned until to-morrow morning at 9 o'clock.

THIRD DAY.

MORNING SESSION.

WEDNESDAY, SEPTEMBER 29, 1880.

Pursuant to adjournment, the Board met at 9 A. M., President Ragan in the chair. A quorum being present the appointment of committees was continued as follows:

On Books C and D—A. M. Alcott, Dr. M. G. Parker.

Educational and National History—Dr. A. W. Brayton.

Motion of Mr. Brown carried, that Department Superintendents be authorized to draw from the Superintendent of permits, the number of tickets, in their discretion, to be given to exhibitors.

Motion of Mr. Barns carried, that supply wagons and horses be admitted free, but each person with such vehicle shall pay twenty-five cents. Those of exhibitors free, when entering with exhibits.

After discussion, motion of Mr. Mutz carried, that the children and teachers of the Public Schools, when coming in a body, be admitted for ten cents. Also, that the scholars and teachers of the Benevolent Institutions of the State, and Orphans Asylums, attending in a body, be admitted free.

Motion of Mr. Lockhart carried, that traction engines and their display, be permitted upon the speed ring on Thursday and Friday at 1 P. M.

Recess taken until 2 P. M.

AFTERNOON SESSION.

TWO O'CLOCK.

An informal meeting held as called at morning meeting. There being no quorum present the President declared a recess until to-morrow at 9 o'clock.

FOURTH DAY.

MORNING SESSION.

THURSDAY, SEPTEMBER 30, 1880.

The Board met, pursuant to adjournment, at 9 A. M., President Ragan in the chair. Quorum being present.

The President suggests the appointment of two members of the Board to separate the railroad coupons from the tickets.

Motion of Mr. Lockhart carried, to adopt the foregoing and appointment of said committee by the chair.

Messrs. Sample and Mutz appointed such committee.

Mr. Lockhart offers the following :

WHEREAS, The Victor Clover Machine has issued a challenge to all other manufacturers of Clover Hullers, for a contest of the various machines, on the Indiana State Fair Grounds, to be held at 1 o'clock, P. M., September 30,

Resolved, That the Board will assent to such trial. The committee to decide upon the merits of such machines to be selected by the parties interested and mutually agreed upon by them.

The Board will sanction the action of said committee, and award the society diploma.

Motion of Mr. Sample carried, that the action of Mr. Meredith, in offering a purse of \$25 for a pacing race, yesterday, be approved.

Recess taken until 2 P. M.

AFTERNOON SESSION.

TWO O'CLOCK.

The Board met, with President Ragan in the chair. A quorum being present, the following sweepstake committees were appointed :

Cattle—Thomas Nelson, Geo. W. King, Orlando Sifle.

Hogs—Joseph Kale, Warren Mason ; Superintendent Seybold to supply the other.

Motion of Mr. Sample carried, that all articles and stock on exhibition shall be detained upon the grounds until Saturday at 12 o'clock.

Adjourned until 9 A. M. to-morrow.

FOURTH DAY.

MORNING SESSION.

FRIDAY, OCTOBER 1, 1880.

President Ragan called the Board to order at 9 A. M., a quorum being present.

Mr. Perkins, of Mishawaka, representing windmills, protests against the placing of ribbons on competing windmills by the awarding committees.

Motion of Mr. Sutherland carried, that the committee be sent for.

Mr. Meredith—Having long since, by order of the executive committee, notified horseman that they could remove their stock on Friday, if they would exhibit at the fair, desired some arrangement made by the Board to relieve him from the dilemma in which he is placed by the action of the Board yesterday.

Motion of Mr. Mutz carried, that the action of the Board in regard to the detention of stock be reconsidered.

Mr. Meredith moved, that stock be permitted to leave the grounds at the discretion of the Superintendents after 5 P. M. this day.

Mr. Haynes moved an amendment, that the order apply to all machinery not competing for premiums and intending to exhibit at other fairs.

Motion as amended adopted.

Offered by general consent, that a diploma be offered for the best herd of Jersey cattle now on exhibition.

The President suggests that the General Superintendent and department Superintendents report the expenses incur-

red, and number of employes in their several departments to date, at 9 A. M. to-morrow, concurred in.

Recess taken until 2 o'clock P. M.

AFTERNOON SESSION.

Board called to order by President Ragan at 2 o'clock.

On motion of Mr. Mitchell, the Board ordered a diploma to the Mechanical, also to the Agricultural and Fine Art displays made by the Purdue University.

Motion carried, that no band be employed to-morrow.

Motion of Mr. Mitchell carried, that the Secretary be instructed to issue orders for payment of premiums from and after 4 o'clock to-day.

Motion carried, that the Chair appoint a committee to examine the system of drawing exhibited by Prof. Alcott, and award diploma if of sufficient merit. Messrs. Sutherland and Turner appointed as committee.

Adjourned until to-morrow 9 o'clock A. M.

FIFTH DAY.

MORNING SESSION.

SATURDAY, OCTOBER 2, 1880.

Board met as per adjournment at 9 o'clock, President Ragan in the chair. A quorum being present, calling the roll was dispensed with.

The minutes of the proceedings of the Board for the week were read and approved.

Reports of department Superintendents received as follows:

Horse Department—H. C. Meredith, four assistants, \$54.
Cattle Department—Robert Mitchell, two assistants, \$11.
Hog Department—Dempsey Seybold, three assistants, \$28.
Sheep Department—S. R. Quick, three assistants, \$14.
Agricultural Department—J. W. Cofield, four assistants, \$26.
Carriages, etc.—J. N. Turner, five assistants, \$20.
Horticultural Department—L. B. Custer, — assistants, \$41.40.
Educational Department—John Sutherland, assistant and ex., \$10.25.
Gates—John P. Barns, thirteen assistants, \$178.
Amphitheater—R. P. Haynes, two assistants, \$20; H. T. Sample, three assistants, \$22; W. H. Ragan, two assistants, \$12; B. H. Hancock, four assistants, \$28.50.

Messrs. Sutherland and Turner report as follows:

We, the committee appointed by the Board to examine Trobridge's Patent Drawing, as taught by Professor J. M. Alcott, beg leave to report that we have examined the specimens and recommend that the Board award Professor Alcott a diploma.

Messrs. Sample Loftin, County Treasurer, and William Pfaff, County Auditor of Marion county, appeared before the Board to inquire whether the Board claimed authority in the matter of licenses to showmen on the grounds.

The Board decided they had nothing whatever to do with licenses.

Mr. Meredith asks instructions of the Board as to whether the free-for-all trot shall proceed with the present entries, there being six.

Ordered, that if in his judgment the race will be fairly contested, the horses be allowed to start.

Thomas Wilhoit enters protest as follows:

To the Honorable President and Board of Directors of the Indiana State Fair, held at Indianapolis, September 27 to October 2, 1880.

In the show of short-horn cattle, four years old and over, cows: My cow, a light roan, name Bright Eyes, and exhibited in the ring under entry card No. 4, was awarded first prize, and the ribbon tied and the cows ordered to the stalls.

The committee, some time after, came around and said that some

mistake had been made, and asked that the change be made, and that the ribbon be taken off my cow, and the blue be placed on instead of the red; or, in other words, that the second premium be awarded to me in place of the first. If, as the committee claim, any mistake had been made, why did one of their number, with the consent of the other two, and in the presence of the Superintendent and spectators, to the number of one hundred and fifty, allow the ribbon to have been tied upon my cow and allow her removed to the stalls?

With all due respect to the gentlemen of the committee and to the honorable Board of Directors, I must enter my protest against such action, and insist that the prize as awarded me in the ring, viz., first premium, be duly entered to my credit, and placed upon my cow No. 4.

The Board decided that as the change of the premium was made by the committee while the book was still in the hands of the committee their action be sustained.

Motion of Mr. Mutz carried, that the police be paid \$1.50 and \$2 per day, according to service, to be graded by the Superintendent, and that the chiefs receive \$4 per day each.

Mr. Seybold asks that he be excused from duty during the remainder of the Fair. Granted.

On motion recess was taken until 1:30 P. M.

AFTERNOON SESSION.

Board met agreeably to adjournment, President Ragan in the chair. A quorum being present.

The General Superintendent reports his inability to make his report at the present time. Referred to the Executive Committee.

Motion of Mr. Mutz carried, that the payment of \$100 by the Grand Army of the Republic for rent of the Fair grounds be accepted as payment in full.

Motion carried, that all unfinished business be referred to the Executive Committee.

Adjourned.

EXECUTIVE COMMITTEE MEETING.

TUESDAY, OCTOBER 5, 1880, 2 O'CLOCK P. M.

Agreeably to call of the President, the Executive Committee of the Board of Agriculture met in the office of Treasurer Wildman, in the rear of the Central Bank, with President Ragan in the chair. Messrs. Mutz, Barns, Meredith, Superintendent Beeler, Treasurer Wildman and Secretary Heron were present.

Treasurer Wildman reported the gate receipts as follows:

To cash received from sale of 51,908 tickets, at 25c.....	\$12,977 00
To cash received from sale of 3,295 R. R. coupons, at 25c..	823 75
	<hr/>
	\$13,800 75
To cash received from sale of 15,513 tickets, at 10c.....	1,351 30
	<hr/>
Total from sale of tickets.....	\$15,152 15

Motion of Mr. Mutz carried, that the President and General Superintendent consult legal advice in reference to closing up the roadway on the south side of the Fair Grounds, and act accordingly.

On motion, adjourned.

ANNUAL MEETING

1881.

AGRICULTURAL ROOMS,
TUESDAY, JANUARY 4, 1881, 10:30 A. M.

Agreeably to call, and in accordance with the provisions of statute law, the Delegate State Board of Agriculture met in annual convention, President Ragan in the chair.

The roll being called, the following members of the Board proper responded to their names:

- 1st Dist.—Robert Mitchell, Princeton, Gibson county.
- 2d Dist.—
- 3d Dist.—B. H. Hancock, Fredricksburg, Washington county.
- 4th Dist.—Hon. W. B. Seward, Bloomington, Monroe county.
- 5th Dist.—J. W. Cofield, Rising Sun, Ohio county.
- 6th Dist.—S. R. Quick, Columbus, Bartholomew county.
- 7th Dist.—Hon. Jacob Mutz, Edinburg, Shelby county.
- 8th Dist.—Dempsey Seybold, Bridgeton, Parke county.
- 9th Dist.—Hon. W. H. Ragan, Clayton, Hendricks county.
- 10th Dist.—Henry C. Meredith, Cambridge City, Wayne county.]
- 11th Dist.—John P. Barns, Anderson, Madison county.
- 12th Dist.—H. T. Sample, Lafayette, Tippecanoe county.
- 13th Dist.—John N. Turner, Marion, Grant county.
- 14th Dist.—L. B. Custer, Logansport, Cass county.
- 15th Dist.—
- 16th Dist.—Hon. R. M. Lockhart, Waterloo, DeKalb county.

The roll of counties was then called for delegates from county societies. The following named gentlemen responded:

COUNTY SOCIETIES.

COUNTIES.	NAMES.	POST OFFICE.
Allen	I. D. G. Nelson.....	Ft. Wayne.
Bartholomew.....	S. R. Quick	Columbus.
Blackford.....	Benj. G. Shinn.....	Hartford City.
Boone.....	A. C. Daily.....	Lebanon.
Cass.....	L. B. Custer.....	Logansport.
Clark.....	Andrew J. Hay.....	Charlestown.
Clay.....	P. F. Sharp.....	Brazil.
Daviess.....	O. B. Steen.....	Washington.
Dearborn.....	W. H. Murdock.....	Lawrenceburg.
Decatur.....	Z. T. Riley.....	Greensburg.
Delaware.....	John M. Graham.....	Muncie.
Fayette.....	Jas. N. Huston.....	Connersville.
Fulton.....	L. W. Shelton.....	Rochester.
Gibson.....	Jasper N. Davidson.....	Hazelton.
Grant.....	John Ratliff.....	Marion.
Greene.....	Frank Stalcup.....	Marco.
Hamilton.....	L. O. Clifford.....	Cicero.
Harrison.....	B. H. Hancock.....	Fredricksburg.
Hendricks.....	Henry B. Ensinger.....	Danville.
Howard.....	T. M. Kirkpatrick.....	Kokomo.
Huntington.....	Robt. Simonton.....	Huntington.
Jackson.....	John Scott.....	Brownstown.
Jasper.....	W. K. Parkinson.....	Pleasant Grove.
Jay.....	Geo. W. Miller.....	Portland.
Jefferson.....	Wm. P. Graham.....	Madison.
Johnson.....	H. S. Byers.....	Franklin.
Knox.....	H. A. Foulks.....	Vincennes.
Lagrange.....	John McDonald.....	White Pigeon.
Lake.....	Bartlett Woods.....	Crown Point.
Laporte.....	L. T. Hardin.....	Laporte.
Lawrence.....	Wm. Day.....	Bedford.
Madison.....	C. K. McCullough.....	Anderson.
Marion.....	Sylvester Johnson.....	Irvington.
Martin.....	Henry T. Johnson.....	Loogootee.
Montgomery.....	F. L. Snyder.....	Crawfordsville.
Newton.....	George Clerk.....	Beaver Timber.
Noble.....	Orlando Kimmil.....	Ligonier.
Orange.....	Wm. T. Spicely.....	Orleans.
Parke.....	Spotsard Collins.....	Rockville.
Pike.....	S. Hargrove.....	Union.
Porter.....	General Suman.....	Suman.
Pulaski.....	J. B. Agnew.....	Winamac.
Putnam.....	Albert O. Lockridge.....	Greencastle.
Randolph.....	Nelson Pegg.....	Cerro Gordo.
Ripley.....	Wm. Holland.....	Osgood.
Rush.....	D. B. Canady.....	Lewisville.
Shelby.....	John Blessing.....	Shelbyville.

COUNTY SOCIETIES—Continued.

COUNTIES.	NAMES.	POST OFFICE.
Steuben.....	A. W. Hendry.....	Angola.
Tippecanoe.....	H. T. Sample.....	Lafayette.
Tipton.....	John T. Hunter.....	Shiellville.
Vigo.....	Joseph Gilbert.....	Terre Haute.
Wabash.....	J. S. B. Carothers.....	Wabash.
Warren.....	James C. Miller.....	West Lebanon.
Warrick.....	John L. Taylor.....	Boonville.
Wayne.....	C. B. Jackson.....	Centerville.
Wells.....	M. Greenfield.....	Bluffton.

DISTRICT SOCIETIES.

DISTRICT.	NAMES.	POST OFFICE.
Bridgeton Union.....	James A. Rea.....	Bridgeton.
Cambridge City	D. B. Canady.....	Lewisville.
Fountain, Warren and Vermillion.....	Oliver Shelly.....	Covington.
Henry, Madison and Delaware.....	N. R. Elliott.....	Mechanicsburg.
Northeastern Indiana...	C. A. O. McClellan.....	Waterloo.
Russellville Union.....	J. N. Fullenweider.....	Brown's Valley.
Southeastern Indiana...	A. D. Hopping.....	Aurora.
Switzerland and Ohio...	J. W. Cofield.....	Rising Sun.
Thorntown Union.....	Archibald Johnson.....	Darlington.
Knightstown Union.....	Joseph C. Campbell...	Knightstown.
Edinburg Union.....	George W. King.....	Edinburg.
Loogootee District.....	Henry J. Johnson.....	Loogootee.
Plainfield Agr'l Society.	Amos Alderson.....	Plainfield.
New Ross Agr'l Society.	John Lockridge.....	Mace.
Orleans Agricultural...	Wm. T. Spicely.....	Orleans.
Terre Haute Horticultural.....	Lawrence Heinl.....	Terre Haute.

STATE INDUSTRIAL ASSOCIATIONS.

ASSOCIATIONS.	NAMES.	POST OFFICES.
State Horticult'l Society	Sylvester Johnson.....	Irvington.
Purdue University.....	Prof. C. L. Ingersoll....	Lafayette.
Dairymen's.....	Asher Kellum.....	Friendswood.
Short Horn Breeders'...	T. W. W. Sunman.....	Spades.
Swine Breeders'.....	A. S. Gilmour.....	Greensburg.
Wool Growers'.....	Fielding Beeler.....	Indianapolis.
Poultry Breeders'.....	Dr. W. J. Elstun....	Indianapolis.
Bee Keepers'.....	F. L. Dougherty....	Indianapolis.
Tile Makers'.....	J. T. Stringer.....	Kokomo.
Woman's Industrial....	Mrs. M. E. Haggart.....	Indianapolis.

During roll call an objection was raised to allowing one delegate (Mr. Spicely) to represent more than one organization or society.

Mr. Hay, of Clark, made a motion to let Mr. Spicely represent both organizations with but one vote.

With some discussion, the motion was so amended as to let the delegate represent both, with the privilege of casting one vote for each society.

The following programme was announced as the order of business for the meeting :

TUESDAY, JANUARY 4, 1881.

Call to order, 10:30 o'clock A. M.

Roll call of delegates by counties and district agricultural societies. Adjournment. Friendly greeting and introduction.

President's Address, 1:30 P. M.

Reports of Officers—Secretary, Treasurer, General Superintendent and Department Superintendents.

Appointment of Committees from the delegates to act with the regular Committees of the Board, two on each of the following Finance, Rules and Regulations, Fair Grounds, Premium List, Geological Department and Unfinished Business.

Nominations to fill the place of retiring members.

Address on the Review of Agriculture in Indiana, by Dr. R. T. Brown, of Marion county, 3:30 P. M.

Address on Wheat Culture in Indiana, by David Gibson, of Indianapolis.

EVENING SESSION—7:30 P. M.

Resolutions of respect to the memory of the late Governor J. D. Williams, ex-President of the Board of Agriculture.

Memorial tributes by Dr. A. C. Stevenson, Hon. A. D. Hamrick, Dr. R. T. Brown, Hon. I. D. G. Nelson and others.

Address on "Forestry" in Indiana, by Prof. C. L. Ingersoll, of Purdue University.

WEDNESDAY, JANUARY 5.

Reports from Committees and other business matters. A. M.

Election of eight members, 1:30 P. M.

Address on "Educated Industry," by Dr. Lemuel Moss, President of the State University at Bloomington, 3:30 P. M.

Address on "Is it important to have experts as Committees to pass on Live Stock at our Fairs," by Robt. Mitchell, of Gibson county.

EVENING SESSION—7:30 P. M.

Continuation of essays and discussions.

Addresses on "Technical Training in American Schools," by President E. E. White, of Purdue University.

Address on "Ponds and Pond Water," with reference to health and wealth, by Geo. L. Curtis, M. D., D. D.

Other appropriate essays are expected, and will be presented as time and opportunity will permit.

General remarks and discussions will be in order, and follow each address or essay.

THURSDAY, JANUARY 6.

Unfinished business and re-organization of new Board.

Upon motion, recess was taken until 1:30 P. M.

AFTERNOON SESSION.

HALF-PAST ONE O'CLOCK.

The convention met, with President Ragan in the chair.

President appoints the following members a Committee on Credentials: Messrs. Quick, Gilbert and Willey.

The delegates not present at the morning session were given time to file their reports with the Secretary.

On motion of Mr. Sunman, Mr. Murdock, a director of the Lawrenceburg Association, was entitled to recognition as representative from that association.

H. T. Sample, Vice-President, was called to the chair. The President then delivered his annual address, as follows:

PRESIDENT RAGAN'S ADDRESS.

Gentlemen of the State Board of Agriculture:

Let us return thanks to Him "from whom all blessings flow," for abundant crops, peace, good health, general prosperity, and for the privilege of again assembling in the capacity of a State Board of Agriculture at the close of another year's labors. During this time many who have labored with us in the great work of promoting industrial interests have been called hence. Notably prominent among these we to-day mourn the loss of one who but recently gave wise counsel and diligent service to all things that pertained to the best interests of this Board and the causes that it labors to promote.

Governor James D. Williams, long a member and frequently President of this Board, after a life of many years well spent in the promotion of all that is noble in the human soul, was peacefully taken from our midst and from his high duties and responsibilities as chief executive of our State, in this city, on November 20, 1880. The adoption of proper resolutions of respect in memory of his distinguished service as a fellow-member and ex-President of this Board, will be your appropriate duty.

Long established custom demands of me, as your presiding officer, an account of my stewardship. In a special message at the beginning of my administration, I ventured to make some suggestions as to the policy to be pursued; now at the close I will beg your indulgence in a brief retrospect of the past in the hope that the experiences of the year may be of value in the future. While it is not true that the annual fairs of this Board constitute the acme of its labors in one sense, they nevertheless do in another. The revenue of the Board must be largely derived from its

ANNUAL FAIRS.

This being true, it is clearly your duty to consider well any propositions of reform or progress that will at the same time enhance the interests in our fairs and increase the revenue there-

from, always provided that this is not accomplished through a compromise with immorality and vice. The moral status of our exhibitions must be scrupulously preserved. If fairs can not be maintained without resorting to questionable devices and complications—in other words, if they can not be maintained on their true merits, the sooner they are permitted to die, to be known no more, the better for all concerned. It is true, in the management of public institutions like our annual fairs, in which the interests of all are to a greater or less extent centered, no individual preference should have entire control, as no one idea or set of ideas can be broad enough on which to found a temple wherein can dwell with prosperity a multitude of tastes and preferences like those permeating the minds and guiding the destinies of our people. Every industry should be fostered, every source of innocent amusement encouraged, and every demoralizing influence whatever strictly excluded from our fairs. I know it has been urged that the State Board of Agriculture is in no sense the guardian of the public morals. This may be true, and yet I incline to doubt. Having briefly indicated my views in reference to general management of fairs, I will now point out in detail what present themselves as a few of the

VALUABLE LESSONS OF THE SEASON.

The late State Fair was, in many respects, eminently successful. Considering the excited condition of the public mind on political questions, and the fact that public meetings were of frequent occurrence in every section of the State, coupled with decidedly unfavorable weather during the early part of the week, I flatter myself with the idea that our receipts were, indeed, quite satisfactory. As a verification of this assertion, I respectfully refer you to the financial statements of the Secretary and Treasurer. These satisfactory results were doubtless due to the increasing prosperity of our country, and to a growing confidence in the business management of the Board.

THE EXHIBITOR

Being a prominent factor in connection with any fair, I will venture a few suggestions in regard to his treatment. His treatment should be liberal in all particulars. Premiums should be carefully graded, and liberal in all the departments, but not so large as to preclude the possibility of their payment in full. Pro rata settlements with exhibitors never result satisfactorily. Prompt and full payments can alone result in permanent prosperity and good feeling. With a good exhibition and a thoroughly established confi-

dence between the exhibitor and the management other good results must follow. One of the most perplexing questions in this connection is how to treat the exhibitor in regard to his admission to the grounds. That they should be admitted free, especially those who are not competing for valuable prizes, there can be no doubt, and it is equally a matter of justice that those who are competitors for premiums should be admitted on special and easy terms, and in such a way that they would not be annoyed at the gates, or be the subjects of annoyance. Contingencies occur in the experience of all exhibitors in the course of the arrangement and display of their articles in which it becomes a matter of necessity for them to pass out and in at the gates frequently, and when this privilege is denied them bitterness and ill-feeling must result. Were it not for the unfortunate fact that all men and all women are not strictly honest, and that a few of this class are exhibitors at fairs, this whole matter would be of easy solution, or were it possible to escape grievous abuse from an indiscriminate granting of season tickets to exhibitors, the desired object would be easily reached. How to overcome these difficulties, and to establish a fair and equitable rule through which the interests of the Board may be safely and well guarded, and at the same time deal liberally with the men and women who make our fairs, are most pertinent questions, and worthy of your careful consideration.

THE DURATION OF FAIRS.

In the experiment of an Exposition in connection with our State Fairs, undertaken at a most unfortunate time, the minimum length of the term was fixed at twenty days. Experience soon demonstrated this to be too long, when a return to one week, as of former years, was agreed upon. This is, in my judgment, too short a period, since, as two days are necessarily consumed in the preparation and as many more in the breaking up, there are but two remaining for the exhibition, and these are so crowded as to be neither pleasant nor profitable to visitors or exhibitors. Exhibitors can not be held after the close of a fair over Sunday without great injustice and annoyance, but preceding the fair but few of them will object. I, therefore, following the suggestions of the Women's State Fair Association, would recommend that Thursday, Friday and Saturday of the preceding week be set apart as days of preparation in which all articles must be arranged, and during which the gates shall be open to exhibitors and all having business on the grounds; that Monday shall be known as the opening day, and that the fair shall close promptly at 4 o'clock P. M. of Friday, after which

all articles may be removed. I am fully persuaded that this plan will meet the approval of a large majority of the exhibitors, and be of interest pecuniarily and otherwise to the Board. I would further recommend, in this connection, that promptly at 1 P. M. of Monday each awarding committee be placed on duty. This will stimulate promptness on the part of exhibitors, facilitate the work of committees, their work being largely done before the crowded days, and afford the successful exhibitor the benefit of his awards as a means of advertising during the remainder and the best days of the fair.

PRICE OF ADMISSION.

The State Board of Agriculture was created for a higher purpose than that of accumulating dollars and cents, and yet it was clearly intended that it should be self-sustaining. Such being the case, I have at all times been the advocate of a low rate of admission. In this particular, it is a matter of pride, that among State fairs, none have been more liberal than ours, while ours has been an exception in combining the features of a fair and exposition, yet the admission fee has steadily been kept down to twenty-five cents. In order to do this, however, it has been necessary to reduce the premium list from year to year, and to forego necessary improvements and repairs on buildings. That we should increase the premium list in most, if not in all the departments, I am fully persuaded. This desirable result can only be reached through an increase in the gate fees. This subject, affecting as it does the vital interests of the Board, I submit as worthy of your earnest attention.

PREMIUMS.

Some years ago, competitive premiums were abolished in the mechanical departments, the exhibitors expressing a preference for a meritorious notice, rather than a competitive award in the absence of practical tests. In most particulars, this plan has given satisfaction, though I think it but a matter of justice, especially to inventors and manufacturers, that a more liberal use should be made of the diplomas and medals of the Board, not to be based upon competitive, but strictly meritorious considerations. There is no class of exhibitors that value a recognition of this kind more highly than the inventor or manufacturer. I would further recommend that a competitive award, consisting of an appropriate medal, be offered for the best general display of goods in each of the several classes, taste and arrangement considered, of the mechanical departments, including agricultural machinery, musical instruments, sewing machines, stoves, hardware, furniture, carpets, etc. Cash

premiums should also be largely increased in most, if not in all the departments now receiving money premiums.

DEPARTMENTS AND THEIR MANAGEMENT.

Under our present system the labors, and especially the responsibilities, of our General Superintendent and his subordinates are often too great. The member having charge of a department should be ready at all times during the fair to consult and advise with exhibitors in regard to their wants; and when, in his judgment, supplies of any kind or improvements for their use and convenience are necessary, he should order the General Superintendent to make the necessary purchases and execute his wishes; otherwise, the Superintendent will often be under the necessity of allowing subordinates to make purchases or of neglecting the wants of exhibitors, either of which is grossly wrong. The departments should be so arranged that the member having charge could easily supervise and care for every want of his exhibitors, and he should feel this to be his imperative duty.

REFRESHMENTS.

An important adjunct, as well through the revenue derived therefrom, as from the absolute necessity of a liberal supply of wholesome refreshments in connection with an exhibition, renders a brief discussion of this subject in your presence a duty, if not a pleasure. The ease and facility with which visitors are supplied with refreshments will have much to do in popularizing our fairs. It is therefore not good policy to place such prices upon stands as will compel renters to charge exorbitant prices for their accommodations, or to tempt them to offer a greatly abridged meal at full prices. Neither should refreshment stands be located indiscriminately throughout the exhibition; they should have separate apartments, not in connection with the exhibition. It is in exceedingly bad taste, indeed an act of positive injustice, to place a refreshment stand immediately adjoining an exhibitor.

THE FINANCIAL CONDITION OF THE BOARD.

That an immense indebtedness, now due, hangs over the property of the Board, is a source of deep regret. It is needless for me to recite in your hearing the causes that brought about this unfortunate condition of its financial affairs, since the facts have often been presented by my worthy predecessors, yet I will venture to exonerate the Board from any charges of criminal wrong in this connection. The facts are, as have already been intimated, the experiment of an Exposition, in connection with our annual fairs, was under-

taken at a most unfortunate time. It is therefore due to the financial conditions that have overshadowed our country so recently, that the property of the Board is now in jeopardy. But during eight long years of embarrassment through which the Board has passed, as if under a dark cloud, the work of promoting the interests for which it was created have not been permitted to lag, nor has there ever been, in the history of the Board, now covering a period of thirty years, a premium awarded at any of her numerous fairs that has not been paid in full. No *pro rata* settlements have ever been made, either with exhibitors or employes, yet members have not unfrequently been compelled to carry their per diem orders from year to year, anxiously awaiting the coming of the "better day."

The Board has made frequent and diligent efforts, even at a sacrifice of its beautiful and valuable grounds in this city, to extricate itself from its embarrassed condition, but thus far hopelessly. The grounds of the Board are immensely valuable, by reason of their beauty and eligibility for building purposes, and are now, under a better condition of the affairs of the country, steadily advancing in value, but as they are too large for most individual purchasers, and the buildings, though permanent and valuable, are not adapted to ordinary uses, it has been exceedingly difficult to find parties willing to bid on them, besides, it is possible, since a forced sale is only a question of time, that those really desirous of owning the grounds, are combining to purchase them on their own terms. Twice already, during this embarrassing period, has this Board been forced to appeal to the generosity of the General Assembly for aid, each time proposing to deed its property to the State in consideration of a liquidation of the indebtedness, the grounds to be held by the State for fair purposes, till such time as they might be otherwise needed. In my judgment the General Assembly, in each case, made a sad mistake in appropriating money to pay the interest instead of paying off the principal and taking a deed. While the debt is not reduced, the appropriations are expended, and the Board is still involved, even more deeply than ever. The thought of again being forced to appeal to the General Assembly is humiliating in the extreme, yet I now know of no way of guarding the State's interest, as well as that of the Board, except through legislative interference. There can be no possible doubt as to the safety of the investment, while the State certainly owes a guarantee of protection to its greatest productive interest, that of Agriculture and kindred arts.

THE CITY OF INDIANAPOLIS

Is fortunately the geographical and the business center of our State,

besides being the capital thereof. No adjoining State has a commercial center, accessible from every point of the compass and without a rival within her border, so well adapted as a permanent location for her annual fairs and other public gatherings, as ours, a fact that the wisdom of our predecessors fully recognized in making the original investment at this point. That investment has, in my judgment, been a fortunate one for the Board and the interests it represents, while the business interests of the capital city certainly have been largely enhanced by the annual contributions that have been presented at her feet during the quarter of a century in which State fairs have been held in her midst. Unfortunately, however, there is a class of citizens of our State, and many of them good citizens, too, who look with jealousy upon the location, while on the other hand, there are business men in the city of Indianapolis who insist, though I could never believe them sincere, that the fairs are of no value to them, in a business sense. These feelings do not naturally exist. Our interests are mutual. Whatever contributes to the commercial interests of Indianapolis, adds to the fame and prosperity of our State. Our fairs are a source of untold wealth to Indianapolis, they are of incalculable benefit to the whole State! Then let us dismiss any petty jealousies, if such really exist, making common cause of the work in hand.

PURDUE UNIVERSITY.

The fundamental law of our State declares it to "be the duty of the General Assembly to encourage, by all suitable means, moral, intellectual, scientific and agricultural improvement." One means adopted for executing this wise provision of our constitution is through the labors of the State Board of Agriculture; another, and even higher, through the State Agricultural College, unfortunately christened Purdue University. These institutions are not only co-laborers in reality, but are made so legally. The Board of Agriculture is authorized by law to select two of the Trustees for Purdue University. Ours is, therefore, in conjunction with Purdue University, only a part of the educational system of our State, having special charge of the scientific and agricultural interests, and with high moral and intellectual responsibilities. Purdue is yet in her infancy, not having passed the first decade of her existence, yet I am pleased to note that her benign influence is already being acknowledged throughout our State. The good influence of such an institution is not manifested through the tempest and whirlwind, but through that still small voice that may already be recognized throughout our State. A higher education that will tend to lead our sons and daughters into, rather than

out of, a liking for industrial pursuits—in other words, an education that will not inevitably lead to the already crowded professions, and to the crowded cities and towns, will do more to wrest our country from pending ruin than empty theories and glittering generalities. Such an institution I believe we have in Purdue, to demonstrate which it only needs the fostering care of those in whose interests its labors are wrought. One of the highest duties of this Board is to guard well the trust herein conferred. If there are existing abuses let us strive to right them, rather than criticise, while withholding the helping hand.

BUREAU OF STATISTICS AND GEOLOGY.

The law creating the Department of Geology placed it under the control and management of the Board of Agriculture, making the Board also custodian of the funds appropriated for the use of the Department and responsible for their faithful disbursement. Through the careful management of the Board, near \$3,000 of this fund were saved up. The last General Assembly abolished the Department of Geology and created in its stead a Bureau of Statistics and Geology, but did not see fit to place it under the control of this Board, neither did the act provide for the transfer of the funds above referred to, or for its return to the State Treasury. In this dilemma the Board sought the opinion of the Attorney General in regard to the disposition of this fund. He authorized the use of such portion of it as might be necessary in fitting up, classifying and labeling the museum and geological cabinet then in the custody of the Board, before transferring it to the care of the Bureau of Statistics and Geology, and that the remainder should be held for the disposition of the General Assembly. The amount remaining will be shown by the reports of the Secretary and Treasurer. Through the use of a small portion of this fund, Prof. Collett, the efficient chief of the new department, has thoroughly revised and re-arranged the Museum, placing it in a shape to be of value to the student and of interest to the casual visitor.

The Bureau of Statistics and Geology now closing its second year's labor, is rapidly proving itself to be of incalculable value; the first annual report of this department, under the efficient management of Prof. Collett, is an encyclopedia of statistical information of great value to the manufacturing and business interest of our State.

INDUSTRIAL ORGANIZATIONS.

The work of promoting the industrial interests of the State is now well organized, the Board of Agriculture standing at the head of all, and being greatly assisted in its labors through each. Hap-

pily agriculture is a wide field, covering as it does, special branches almost *ad infinitum*. Horticulture, cattle breeders, dairy, swine breeders, wool growers, poultry breeders, bee keepers, tile makers, and the Woman's State Fair Association, are now each fully organized, and in a measure looking after these special interests. The Board of Agriculture is under obligations to each of these associations, more especially so to the very efficient Woman's State Fair Association, under the management of its able and indefatigable officers.

Through the reports of the officers and department superintendents you will be furnished the details of the year's work. To each of these I am indebted for numerous courtesies, and valuable assistance. The cordial support that I have at all times received from my fellow-members places me under lasting obligations to each. Your duties have been numerous and exacting, your pay has been insufficient, and the public criticism sometimes severe. You have performed well your part, and I at least can thank you. To the officers of the Board, much credit is due. Your work, never light, has at times been almost superhuman. You are justly entitled to the coveted plaudit, "well done."

President Ragan resumes the chair.

Motion of Dr. R. T. Brown carried, that a committee of three be appointed to draft resolutions of respect to the memory of the late Governor, James D. Williams, ex-President and an eminent member of the Board of Agriculture.

Committee appointed to report at evening session, consisted of Dr. R. T. Brown, Dr. A. C. Stevenson and Hon. I. D. G. Nelson.

SECRETARY'S REPORT.

GENTLEMEN: I have the honor to submit herewith the annual report and financial exhibit of the business of the Indiana State Board of Agriculture for the year ending December 31, 1880:

FINANCIAL EXHIBIT.

Receipts.

1880.			
Jan.	9.	Cash in hands of Treasurer.....	\$12,598 89
"	"	From State special appropriation...	\$2,400 00
June	10.	From State special appropriation...	2,400 00
Dec.		From State special appropriation...	2,400 00
			<hr/> \$7,200 00

Oct.	2.	From State Fair admission tickets..	\$12,977 00	
"	"	From State Fair railroad admission coupons.....	823 75	
				\$13,800 75
"	"	From State Fair amphitheater tickets.....	\$1,351 30	
"	"	From State Fair entry fee (speed ring).....	955 00	
"	"	From State Fair sales of privileges.	2,330 75	
"	"	From State Fair rents of stalls and pens.....	371 25	
				\$5,008 30
"	30.	From rents driving track (season).	\$110 00	
April.	24.	From rents walking match.....	75 00	
July	22.	From rents Colored Association....	75 00	
"	30.	From rents Gun Club.....	60 00	
Aug.	20.	From rents Colored Agricultural Society.....	100 00	
Sept.	15.	From rents Grand Army Republic.	120 00	
				\$540 00
Feb.	25.	From R. P. Haynes, committee money returned.....	16 00	
"	"	From old iron piping sold.....	1 75	
				\$17 75
"	"	From insurance policy, old floral hall.....		\$493 30
Total				<u>\$39,658 99</u>

Expenditures

General cash orders.....	\$16,070 39
Premium orders.....	6,553 00
Balance in treasury.....	17,035 62
Total.....	<u>\$39,658 99</u>

STATEMENT SHOWING DISTRIBUTION OF EXPENSES.

General Expenses.

Members per diem and mileage.....	\$1,334 25
Salaries, Secretary and General Superintendent	1,387 50
Printing and advertising	761 72
Postage and stationery.....	210 67
Incidentals, express, telegrams, etc.....	203 59
Furniture and tools.....	55 77
Insurance.....	393 15
Claims of past years paid.....	789 80
Interest account.....	5,033 05
Total... ..	<u>\$10,174 50</u>

Construction and Repairs.

Amphitheater rebuilt	\$600 00	
Roofing dining hall and repairs.....	207 35	
Lumber	510 06	
Labor on repairs (grounds).....	753 03	
Hardware.....	121 26	
Machinery and repairs.....	790 86	
Moving buildings	70 00	
Whitewashing	19 85	
Total.....		\$3,072 41

Current Expenses of State Fair.

Gate keepers.....	\$182 00	
Ticket sellers.....	157 00	
Assistant general superintendents.....	40 00	
Assistant department superintendents.....	143 95	
Woman's department.....	447 00	
Committees on awards.....	288 50	
Police.....	482 00	
Engineers, sweepers and care-takers.....	291 54	
Printing tickets and badges.....	98 75	
Straw	160 55	
Fuel.....	30 50	
Rent of show-cases, coops, etc.	108 39	
Gas.....	135 28	
Music.....	88 00	
Decorations.....	25 00	
Specialties—speed ring.....	150 00	
		\$2,823 46

Premium Awards.

Horse department..	\$3,126 00	
Cattle department.....	980 00	
Sheep department.....	460 00	
Hog department.....	616 00	
Poultry department.....	195 00	
	5,377 00	
Agricultural department—grain, etc.....	272 00	
Horticultural department.....	408 00	
Geological and Natural History.....	55 00	
Woman's department.....	\$393 00	
Children's department.....	58 00	
	441 00	
Total.....		\$6,553 00
Total general cash and premium orders		\$22,623 37

FINANCIAL EXHIBIT—STATE FAIR—INCLUSIVE.

Receipts.

Admission tickets	\$18,800 75
Amphitheater tickets	1,351 30
Entry fees (speed ring)	955 00
Sales of stands and privileges	2,330 75
Rents of stalls and pens	371 25
Total	\$18,809 05

Expenses.

Members' per diem (season)	\$1,334 25
Salaries of Secretary and Superintendent	1,387 50
Printing and advertising	761 72
Postage and stationery	210 67
Express, telegrams and incidentals	203 59
Current expenses, fair week	2,376 46
Construction and repairs	3,072 41
Woman's department	447 00
Premium awards	6,553 00
Total	\$16,346 60
Net surplus from State Fair	2,462 45
	\$18,809 05

The total number of entries at the fair, in comparison with other years, are as follows:

STATEMENT OF COMPARATIVE ENTRIES.

	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Live stock	1,229	1,453	1,347	918	1,404	1,419	1,524	1,382
Agricultural	419	494	392	309	560	625	462	381
Horticultural	169	291	260	94	116	159	143	130
Textile fabrics	523	361	345	212	471	906	1,091	938
Domestic and miscellaneous							139	125
Total number entries	2,340	2,599	2,344	1,633	2,551	3,109	3,359	2,956

No entries in the Mechanical Department are included in the above, as there were no premiums offered of late years in that department.

STATEMENT OF COMPARATIVE RECEIPTS DURING STATE FAIR WEEK.

For 1876.....	\$6,842 70
For 1877.....	11,511 00
For 1878.....	15,991 38
For 1879.....	22,915 50
For 1880.....	18,809 05
In Treasury December 31, 1878.....	7,688 00
In Treasury December 31, 1879.....	12,598 00
In Treasury December 31, 1880.....	17,035 00

There are outstanding claims on accounts current unsettled, to amount of about \$300, and the interest coupons on the bonds of the Board due January 1, amounting to \$2,400.

The appropriation by the Legislature of \$10,000 to pay the interest on the bonds of the Board has been drawn as needed—semi-annually,—\$2,400 each time.

The bonds of the Board, amounting to \$60,000, are due January 1, 1881. The Fair ground property is mortgaged to secure the bonded debt.

There has been \$1,050 of guarantee bonds, assessment notes, canceled during the past year, leaving \$14,000 outstanding, on which 90 per cent. has been paid.

Assets of the Board.

Thirty-six acres, Fair ground and buildings.....	\$100,000 00
Two and three-fourth acres, out-lots for railroad switch..	5,000 00
Library and movable property.....	500 00
Cash in treasury.....	17,035 00
Total.....	<u>\$122,535 00</u>

Liabilities.

Sixty 8 per cent. five-year coupon bonds, due, \$1,000 each..	\$60,000 00
Interest coupons on bonds due January 1.....	2,400 00
Appropriation from State Treasury.....	35,000 00
Assessment notes from guarantee bonds, to be returned from future profits.....	14,000 00
Outstanding claims.....	300 00
Estimated surplus.....	10,835 00
	<u>\$122,535 00</u>

Insurance.

During the afternoon of the 10th day of December the building on the Fair ground known as the Old Floral Hall, of late years

used for stabling, caught fire and was entirely consumed, on which was a policy of \$500, which was collected. The loss will amount to four or five hundred dollars.

The insurance on the Fair ground buildings at present is as follows:

Exposition building.....	\$29,500 00
Stables on east side of grounds.....	800 00
The old dining hall, formerly fine art.....	500 00
Dwelling house.....	400 00
	<hr/>
	\$31,200 00
	<hr/>

Divided among twenty-two companies, at the rate of 1½ per cent. on the main building and 1 per cent. on the other buildings.

GEOLOGICAL DEPARTMENT.

The expenses in this department have been confined to placing the cabinet and museum in a proper condition for transferring to the curator of that department, as required by law.

Receipts.

1880.

Jan. 9.	In Treasury.....	\$2,963 64
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Disbursements.

July 29.	O. B. Gilkey, making cases and repairs.....	\$104 25
Aug. 6.	G. K. Green, labeling and arranging cabinet.....	63 45
Sept. 10.	G. K. Green, putting cabinet in order	50 00
Oct. 9.	G. K. Green, classifying cabinet.....	62 00
" 30.	O. B. Gilkey, repairs in museum.....	5 65
" "	G. K. Green, arranging museum.....	79 29
Nov. 27.	G. K. Green, arranging cabinet.....	27 75
Dec. 14.	Wm. A. Green, arranging cabinet. ...	21 00
" "	G. K. Green, arranging cabinet.....	37 65
" 24.	O. B. Gilkey, making cases.....	248 80
" 30.	G. K. Green, arranging cabinet.....	74 48
" "	Wm. A. Green, assistant, arranging cabinet.....	19 50
		<hr/>
		\$793 77
Dec. 31.	Cash in Treasury.....	2,169 87
		<hr/>
Total		\$2,963 64

There has not been any litigation in connection with the business of the Board during the past season, or any protests on file, except a trifling matter in the woman's department. Several threatened suits and protests have been adjusted without the aid of the courts.

There was published 3,500 copies of the last annual Agricultural Report for 1879, of which one-third have been distributed to foreign States and countries. The demand for them has been unusual, and prompts the request for a greater supply to be printed in the future.

The State Industrial Associations and their connection with the Board of Agriculture are attracting attention abroad. This feature of industrial education should receive encouragement in every possible manner.

A meeting of representatives of the Boards of Agriculture in the Western States was called to meet November 30, and responded to on the part of your Board by Mr. Sample, Vice President Dr. R. T. Brown, by special invitation, and your Secretary. The object of the meeting was for consultation, to adopt a more uniform system and co-operation in the work of the Boards of Agriculture.

I have made a special report of the meeting as a representative from your Board, which is ready, at the pleasure of the convention.

It is presumed that the Superintendent of each department of the Fair will report thereof in detail, therefore I will only refer to some new features which are attracting attention abroad.

Although no premiums are offered in the Mechanical Department, but other encouragement instead, we secured the largest exhibition of agricultural machinery that has ever been seen anywhere, as stated by parties that make a business of exhibiting at State Fairs, and would recommend that the reports of this department be printed in pamphlet form at the close of the Fair. Our Fair is the pioneer in this feature, which will probably be adopted by other States; as also, the new feature of the Woman's Department. We have received many letters of inquiry as to the working of that department, which has proved to be such a grand success, and a useful auxiliary of the Board.

The business of the office continues to increase. During the past season there were issued over 1,800 general letters, 1,500 postal cards, about 12,000 circulars and premium lists, and 18,000 posters, large and small. Over 200 general cash orders have been issued, and 1,070 premium orders.

The work of the Board is almost unlimited in extent, in promoting the interests of agriculture, to show the vast resources of the State and how to best protect them.

Again, we are indebted to the press of the State, the railroad and

express companies and the Street Railway Company, for their mutual aid and many special favors.

With much pleasure I acknowledge the kindness and courtesy received on every hand.

Respectfully submitted,

ALEX. HERON,

Secretary.

TREASURER'S REPORT.

GENTLEMEN:—I have the honor to submit the Annual Report of the Treasurer of the State Board of Agriculture for the year ending December 31, 1880:

Received from former Treasurer.....	\$12,598 89
From specific appropriation.....	7,200 00
" Sale of 51,908 twenty-five cent tickets....	12,977 00
" Sale of 8,925 Railroad coupon tickets.....	823 75
" Sale of 13,513 amphitheater tickets.....	1,851 30
" Entry fees, speed ring.....	955 00
" Sale of privileges.....	2,330 75
" Stalls and pens.....	371 25
" Rent of grounds.....	540 00
" Interest.....	150 00
" Insurance policy.....	493 30
" Specific.....	17 75
Total receipts.....	<u><u>\$39,808 99</u></u>

Disbursements.

Paid on general cash orders.....	\$16,936 79
" Premiums.....	6,481 00
" Notes on hand.....	325 00
" Cash on hand.....	16,066 20
Total.....	<u><u>\$39,808 99</u></u>

GEOLOGICAL FUND.

1880.

Jan. 9. Received from former Treasurer.....	<u><u>\$2,963 64</u></u>
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Disbursements.

Expense orders No. 1 to 18 (being the same as itemized in Secretary's Report as published)	\$798 77	
Cash on hand.....	2,169 87	
		<u>\$2,968 64</u>

Respectfully submitted,

J. A. WILDMAN, *Treasurer.*

January 4, 1881.

GENERAL SUPERINTENDENT'S REPORT.

To the President and Members of the Indiana State Board of Agriculture:

I deem it unnecessary, on my part, to make any special report of the receipts and expenditures under my supervision, as the same appear in detail in the reports of the Secretary and Treasurer.

Allow me to say, however, that I have endeavored to secure all the income possible and expend as little as was consistent with the reasonable accommodation of exhibitors and the comfort and convenience of visitors to the fair.

On assuming my duties as Superintendent, I found a great desire among the horsemen who patronize our track to have some improvements and changes made. After having several applications and proposals from different parties, I leased the dwelling and track to Mr. Webster Beymer for \$150 for the year, he to make the proposed improvements at his expense, and I to pay engineering expense. He made the changes and improvements suggested, coated the track with manure, plowed the same under and placed the track in first-class condition, and so far as I have learned the horsemen have been well pleased. A prominent one has assured me that it is not excelled, in some respects equaled, by any half mile track in the West.

In June last we were visited by a severe storm which blew down the amphitheater and did considerable other damage on the grounds. It was evident that it should be rebuilt if we expected to hold a successful Fair.

After consulting the President, Secretary, and a few members of the Board, met with in the city, it was deemed unnecessary to call a special meeting of the Board on account of inconvenience to the members, and the expense which would necessarily be incurred.

After consultation with practical builders, a plan was adopted which would allow of the use of the old material and giving nearly as much seating capacity as the old one, the reconstructed building being 400 feet long and 22 feet wide. Working drawings and specifications were prepared by Mr. O. B. Gilkey, a practical builder. Proposals were advertised for through the city papers, and a number of bids received. The lowest bidder was Mr. Peter Routier, one of the most reliable and energetic builders of the city. His bid was accepted and the building completed in the time specified. The work is plain but substantial. Perhaps it will not be out of place to say here, that the bid accepted was very much lower than any other received, to-wit, \$600; and also very much lower than I, or any one whom I had consulted, thought it could be done. There was some work not included in the contract, amounting to probably \$50. It was found absolutely necessary to re-roof the old music hall. An addition of 24 feet in length was built to poultry hall; a building put up on the west side of the ditch, convenient to the hog and sheep pens, and cattle stalls for stock; Superintendent's and Committee headquarters; a new water closet for ladies, and one for gentlemen; octagonal lunch stands removed and converted into sheep pens; a considerable portion of the sheep pens and cattle stalls re-covered with shingles, saved from the wreck of the amphitheater. A large amount of repairing was necessarily done to fences and stalls, both of which on the north and west are in *very bad condition*.

The octagonal building, generally known as old floral hall, but which has for several years past been used as a stable, was, unfortunately accidentally burned a short time ago. Fortunately, though a rather expensive and valuable building, it had ceased to be an essential one.

The members of the Board certainly have good reason to feel gratified at the success of the fair of 1880, which must pass into history as one of the most successful held since their institution, and greater than could reasonably have been expected under surrounding circumstances.

While no department was lacking in interest, that of agricultural machinery was eminently superior, both in amount and quality, to any exhibition heretofore made on our grounds, if ever equaled on any grounds. In fact, it is the opinion of gentlemen who have visited the most noted fairs of this country and Europe, that our exhibition was superior to any ever made before.

In the condition of uncertainty in which we find ourselves as to our grounds, I consider it useless to make suggestions as to improvements or changes on the same.

I would advise no expenditures at present, except what may be absolutely necessary for the preservation of the property.

In conclusion, I tender my thanks to the members of the Board for their support and courtesy, and especially to the President and Secretary, who have been my special advisers.

FIELDING BEELER,
General Superintendent.

REPORTS FROM DEPARTMENTS.

HORSE DEPARTMENT.

HENRY C. MEREDITH, *Superintendent.*

The show in this department was very fine in all the classes, and gives evidence of a marked improvement in the quality of our horse stock, though the exhibition was not quite so large as the year previous.

The show of stallions in all the classes was excellent, showing that our farmers and breeders have every opportunity of using the best sires, and that they are enterprising in using them. The evidences from all parts of the State show that the thoroughbred trotter and heavy draft horses are being extensively brought into the State, and of the very best quality of their several classes. We have now some of the best and most fashionably-bred trotters and runners within our borders that the country affords, and large amounts are being annually expended in bringing both Normans and Clydesdales of superior quality, which, added to the stock of old and careful breeders, gives us a grand start in the profitable and useful industry of horse breeding.

The list of entries was as follows:

Book 1—Thoroughbreds.....	11 entries.
Book 2—General purposes.....	62 entries.
Book 3—Light harness.....	50 entries.
Book 4—Heavy draft.....	38 entries.
Book 5—Runners	21 entries.
—Trotters.....	23 entries.
—Pacers.....	7 entries.
Total speed.....	51 entries.

Book 6—Saddle horses.....	10 entries.
Book 7—Sweepstakes.....	55 entries.
Book 8—Jacks and mules.....	29 entries.
Book 9—Jacks and mules (sweepstakes).....	15 entries.

Total number of entries.....321

Receipts, entry fee of speed ring.....\$955 00

Receipts, rent of horse stalls..... 269 00

In view of the small premiums which our Society offers in comparison with other similar associations, I would advise allowing horses—especially geldings and mares—to be shown in any class where the owner desires. This would allow saddle, harness, general purpose, thoroughbred and trotters to show in any or all classes. It would increase the number of exhibitors to attend the Fair, for they would thus stand more than one chance, and it would not cost the Society anything additional.

I would recommend that a class be opened for trotting-bred horses, as there is now a standard record of their pedigrees—the main requirement to be that they be recorded to be eligible to show in the class. It will be necessary hereafter to join the National Trotting Association, as a late rule practically expels from their tracks a horse that trots at a fair on a non-association track. I am satisfied, with two years' experience, that the Horse Department of the State Fair can not be a success hereafter unless this is done.

My successor can avoid much of the hard labor that has devolved upon both the marshal and myself by having printed programmes of the show, as it will take place, and posting in each stall, making a requirement that the exhibitors be in the ring within a certain stipulated time. Very much time is consumed in waiting on tardy exhibitors, who would, if required to look after their own affairs, instead of depending on a marshal to look them up when wanted, be on time and ready for the show.

I am glad to say that there was very good feeling generally among the horsemen, and quite good order prevailed, especially on the days when there was the largest attendance. The committeemen in this department were all competent and expeditious, and their decisions gave general satisfaction.

There was a general disposition among all to do everything they could to make the show a success, and I hereby acknowledge my obligations to the exhibitors for the interest manifested.

CATTLE DEPARTMENT.

ROBERT MITCHELL, *Superintendent.*

Mr. President and Members of the State and Delegate Board of Agriculture:

Having in charge the Cattle Department, I have to report that the show of Short Horns was excellent in quality, and nearly all that were on exhibition were from our own State, with only one exception—a herd from Ohio. The exhibitors were Thomas Wilhoit, of Henry county; E. Clare, of Montgomery county; J. Baugh & Son, of Tippecanoe county; S. R. Quick & Son, of Bartholomew county; Samuel Pursell, of Marion county, and David Selsor, of Ohio.

The Jerseys were also well represented, and much interest was taken in the exhibit by the breeders of this class of cattle. The breeders were Churchman & Jackson, of "Beach Grove Farm;" W. J. Hasselman, of Indianapolis; A. Garrettson & Bro., Pendleton; R. S. Dorsey, Indianapolis; W. A. Ketcham, city; J. W. Myers, of Jennings county, and Mrs. A. Wallace, city. I would recommend that a herd premium be hereafter offered by the Board for this class of cattle.

A pair of Polled Angus cattle were exhibited by Baugh & Lutz, of Farmers' Institute, Ind., which attracted much attention. This breed of cattle is held in high esteem as beef producers by the farmers of their native country (Scotland).

Devons and Ayreshires had but a few representatives at the Fair, but those on exhibition were good specimens of the breeds. Total number of entries in Cattle Department, 178.

I might here, with propriety, recommend that the premiums on cattle be increased, in order to draw larger exhibits of this important branch of agriculture to our annual State Fairs.

SHEEP DEPARTMENT.

S. R. QUICK, *Superintendent.*

I have the pleasure of submitting to you a partial report of the Sheep Department. There were 247 entries, being a greater number of entries than ever before was on exhibition at any fair in this

State. They were of the following breeds: Cotswolds, Leicesters, Lincolnshires, Shropshire-downs, Southdowns and Merinoes, but the Cotswolds predominated. Nearly all that were shown were superb specimens, some being the best that ever were exhibited in the United States. In the Cotswolds there was quite a spirited contest, there being seventy-seven entries, and quite a number were imported from England and Canada, and in the sweepstakes there were seventy-seven entries, there being as high as twenty head in the ring at one time contending for the same premium. But everything passed off quietly and with the best of feeling between the exhibitors and the members of the State Board.

The committees had an arduous time, as all the sheep were good and the majority of them were deserving, and the critics were as thick as the fallen leaves of autumn. But the committees did their work so well that I heard of no dissatisfaction. The accommodations for the sheep men were much better than last year, and they expressed their pleasure with the arrangements made by our General Superintendent in making ample room for all the sheep that were on exhibition, and the office for the Superintendent was quite a pleasant surprise to the exhibitors and also a great convenience, highly appreciated by all. The sheep were all shown in a ring for that purpose, which was much appreciated by the exhibitors, as well as committees, and they all expressed their pleasure with the exhibition, with a promise to be with us again.

SWINE DEPARTMENT.

DEMPSEY SEYBOLD, *Superintendent.*

The swine shown at the exhibition of 1880 were probably not so large in numbers as at some of the previous fairs, but for variety of breeds and superior excellence in quality and attractiveness in appearance, have never been equaled. The number of animals on exhibition was nearly four hundred head, consisting of one hundred and seventy-five Poland China, one hundred Berkshires, and other breeds amounting to one hundred, consisting of Essex, Suffolk, Chester Whites, and Jersey Reds.

The animals exhibited were not all the product of Indiana. Our breeders encountered sharp competition from those of Ohio, Illi-

nois and Michigan, and some premiums were borne off by exhibitors from other States.

There were several subjects connected with the swine exhibition which were very freely discussed by exhibitors in a becoming temper, and which were spoken of by others wholly unconnected with the swine exhibition. These matters of complaint it was the desire of exhibitors to have brought to the attention of our State Board, so that they could be duly considered, and such changes made as might meet the pressing demands of not only exhibitors at our fairs, but the entire public who are interested in this branch of agricultural pursuits. And before remarking further, I wish to premise that there was no disposition exhibited to indulge in unreasonable fault-finding of the State Board.

The representatives of the swine interests are fully aware of the financial difficulties they have to contend with. While all this is true, the proper and kindly presentation of claims and complaints of swine exhibitors will surely be no offense to any one, and will enable the Board, in the future, to make an effort to meet all the reasonable demands of those who exhibit swine at our State Fair. There is one point that we wish to consider, and that is the insufficiency of the amount offered as premiums in the swine department, in proportion to the money value of this branch of the industry of our State. Not having the statistics of this branch of our industry at hand, yet I think that the hog yields more money to the farmers of the State than either horses or cattle, and probably more than both. By reference to the premiums offered by the Board for the year 1880, we find there was offered in the swine department the sum of six hundred and forty-four dollars, and in the horse department twenty-five hundred and seventy-eight dollars; four times as much as in the swine department. The breeders of swine claim, and we think justly, too, that there should not be such a wide difference made in the two departments, and the comparison would be about the same in some of the other departments. There is another point in connection with this subject which can not be too often or too pressingly urged upon the attention of those connected with the management of fairs.

I refer to the want of proper arrangements for bringing competing animals in direct juxtaposition, so that swine committeemen may have the same opportunity for close critical examination and comparison that judges of horses, cattle, sheep, etc., have. Such comparisons are indispensable to direct conclusions, and yet committeemen in the Swine Department have no opportunity for such close comparison; on the contrary, they are expected to clamber over from eight to a dozen pens to examine animals that are some-

times two or three hundred yards apart. They have not only this severe labor to perform, but they are expected also to carry in their minds the precise minute differences that may exist between a dozen of close competing animals of like general appearance. The committee on horses and other domestic animals have no such hardships to endure or difficulties to encounter. The competing animals are directly before them. The best possible facilities are offered the judges to facilitate them in coming to correct conclusions.

The Swine Breeders Association, at their meeting last winter, requested the State Board to classify the different breeds and place each breed in a separate division, which was carried out, and I would recommend a continuance of that plan, as I think it works well. In order to try to obviate some of the difficulties stated above, I called the attention of the President and the General Superintendent to the matter early in the season, showing the necessity of some better arrangements for the exhibition of swine, but owing to the financial condition of the Board, I suppose there was nothing done. We had to do the best we could under the circumstances by using boxes and hurdles belonging to some of the exhibitors and occupying the space between two of the divisions of pens. We succeeded in getting the competing animals close together, but it was not only dangerous but an injustice to some of the exhibitors, especially those exhibiting sheep, and in this connection I wish to return thanks to Mr. Cal. Darnell for his gentlemanly forbearance with us for obstructing the sides of his pens so as to exclude visitors from seeing some of his sheep for a good part of two of the best days of the Fair. The committee appointed by the Board reported promptly and discharged their duties faithfully and impartially. The competition in some of the classes was sharp and close, so much so that the committees had great difficulty in making their awards; particularly was this the case on Berkshire pigs under six months, and yearling Poland China sows, and on sweepstakes on Poland China sows.

The very best of feeling prevailed during the entire week, both among the breeders and exhibitors, and I think the week was profitably spent. In this connection I wish to return my thanks to all of the exhibitors for their gentlemanly treatment, and for the interest they manifested in order to make the exhibition a success, and especially to Mr. Joseph Winn, of Greensburg, my assistant.

EXHIBITORS IN THE SWINE DEPARTMENT.

Poland Chinas.

Shepard & Alexander of Charleston, Illinois, exhibited seventeen head.

D. L. & G. W. Thomas, Rushville, Ind., exhibited fourteen head.
J. Cunningham, Muncie, exhibited fifteen head.
Dick Jones, of Columbus, exhibited thirteen head.
M. Slaughter, of South Charleston, Ohio, exhibited fourteen head.

W. A. Macy, of Lewisville, exhibited four head.
A. W. Ross, Muncie, exhibited nine head.
Lon Hunter, Marion, exhibited eight head.
Mugg & Seagrave, Center, exhibited twenty-four head.
A. Martin, Muncie, exhibited four head.
W. A. Robins, Greensburg, exhibited nine head.
Gilmore & Craig, Greensburg, exhibited five head.

Jersey Reds.

E. Wright, New Augusta, exhibited twenty head.

Berkshires.

I. N. Barker, of Thorntown, exhibited eight head.
Gilmore & Craig, Greensburg, exhibited nineteen head.
James Riley, Thorntown, exhibited eighteen head.
A. C. Shortridge, —, exhibited six head.
J. T. Harris, New Maysville, exhibited fourteen head.
Heck & McCally, Waldron, exhibited nineteen head.
R. T. Corwin, Mount Summit, exhibited seven head.
W. H. Sphar, city, exhibited four head.
John Heavenridge, Liberty, exhibited fourteen head.
F. M. Pitzer, Kokomo, exhibited seven head.
J. M. Leach, Dunlapville, exhibited eleven head.
Adam Martin, Muncie, exhibited one head.
Wesley White, of Pendleton, exhibited three head.

Essex and Suffolk.

Frank Wilson, Jackson, Michigan, exhibited twenty-seven head.

Chester Whites.

R. S. Russell, of Zionsville, exhibited twenty-seven head.

POULTRY DEPARTMENT.

B. H. HANCOCK, *Superintendent.*

Mr. President and Gentlemen of the State and Delegate Board of Agriculture:

In accordance with the custom of the Board, I make the annual report of the Poultry Department at the State Fair of 1880. There were 320 entries, and as good an exhibit of poultry as was ever made in this State or any other. We had poultry exhibited that took the premium at the National Poultry Show here one year ago. The Secretary, by consent, telegraphed to Ohio and secured the services of an expert, Mr. Samuel White, to pass upon the poultry exhibit. I think he gave entire satisfaction. If there was any one dissatisfied with his awards, I did not hear of it. I would recommend that *experts* he employed to award premiums in all the departments, as far as practicable; I think it would give better satisfaction. I would recommend, also, that empty coops be furnished exhibitors; that their coops be set outside the house, and when a certain lot or kind of poultry is called for, that the exhibitors move their poultry in these empty coops. The judges will then have the exhibit all before them, instead of going all through the house to find them; it will save time and give the committee a better opportunity to do their duty. All of which I respectfully submit.

AGRICULTURAL DEPARTMENT.

J. W. COFIELD, *Superintendent.*

The exhibition of agricultural products exceeded, both as to quality and quantity, that of any previous year for many years past—the corn exhibited was of the very finest, including a great many varieties, in fact, more than has ever been exhibited at any recent State Fair.

The display of wheat was excellent in quality and variety. Of the varieties shown, the Foltz and Mediterranean or Red Wheat, were the leading ones.

The exhibition of garden products was large, and as good as has ever been shown at our fairs, and shows that the crops were abundant, and, as was the case in our State the past season, exhibitors were willing and anxious to compete with their neighbors for the ascendancy in the growth of their individual products.

HORTICULTURAL DEPARTMENT.

L. B. CUSTER, *Superintendent.*

As Superintendent of the Horticultural Department at the last State Fair, I beg leave to submit the following report :

In this department the display of apples, pears, peaches, quinces and grapes was very creditable, but not equal to former years, when the premium list was more attractive. The premiums now offered are not sufficiently large to attract exhibitors from a distance.

W. A. Ragan, E. A. Eickhoff and G. Poindexter & Son, in the professional, and Mrs. Wallace, A. B. Shellady and some others in amateur list, made very fine displays of apples, pears, peaches, etc. W. A. Ragan was awarded the premium for the best display of fruits of all kinds, professional, exhibiting ninety-one plates of apples, eighteen of pears, twelve of peaches, nine of grapes, seven of quinces and one of persimmons. Mrs. Wallace was awarded a similar premium as an amateur exhibitor.

T. S. Hubbard, of Fredonia, New York, exhibited a plate of the "Prentiss" grape, a new candidate for the public favor, a white grape of excellent quality, and said to be hardy and very productive.

E. A. Eickhoff and T. C. Barnum, made very fine displays of nursery stock. Unfortunately for Mr. Barnum, he failed to make an entry of his stock until the books were in the hands of the awarding committee.

As improvement in agriculture, horticulture, stock-growing, etc., is the mission of the State Board of Agriculture, I would suggest that we advance one step in the horticultural department by adopting a standard of excellence (if you please to call it such) to guide awarding committees in making their decisions. The need for such a standard to guide the judges in the proper performance of their delicate and arduous duties has often been painfully apparent. I would also recommend that premiums be offered for single plates of the most prominent varieties of apples, and that clasps be provided to fasten labels to the plates, so that they are at all times in a conspicuous place, and can not be misplaced by persons examining the fruit. We need to look more to giving information during the fair, and clear, distinct and accurate labels would be a valuable acquisition.

In the floral division, the contributions fully occupied all the space that could be obtained for this department, and the contributors arranged the plants so as to produce a fine effect, which added

much to the attractions of the exhibition. It is a fact, however, that the owners of some of the best collections of plants declined to bring them out, on account of the inferior accommodations provided for the floral display. The hall in which it was made was so open that the chilling winds prevalent at that season are destructive to delicate plants, and the liability to damage from frosts, rendered it unwise to bring out that class of plants most useful in making a display that will attract attention and please those who visit the State Fair, expecting to find the various departments superior to those of local exhibitions.

To render this department what we believe it ought to be, we consider it essential not only to provide a building tight enough to protect plants from inclement weather, but also to give premiums of sufficient amount to repay the actual loss occasioned by temporary removal of the plants from their congenial quarters in the conservatory. If the amount devoted to floral premiums can not be increased, we believe it would be advisable to diminish the number of premiums so that the amount of the remaining may be increased.

Few departments of the Fair are more beautiful, instructive or elevating in their character than that devoted to Flora, and the character of the State and the intelligence of the Board of Agriculture will be estimated in some degree by the character of this department at our annual exhibitions.

TEXTILE FABRIC DEPARTMENT—WOMAN'S BOARD OF INDUSTRY.

MARY E. HAGGART, *Superintendent.*

Mr. President and Gentlemen of the State Board of Agriculture:

In reporting the work, the success and the exhibit of the Woman's Department, I will condense as much as possible, and at the same time give a thorough and just account of the success of our plans and the results of our work. Entries made were as follows:

Textile Fabric.....	5
Domestic Manufacture.....	110
Knitting and Crochet Work.....	109
Lace Work.....	90

Embroidery and Braiding.....	191
Sewing—Machine and Hand.....	46
Miscellaneous.....	179
Dry Goods and Millinery.....	7
Culinary Articles.....	110
Children's Department.....	91
Special Premiums.....	85
Total.....	1023

Which is 163 short of the number of entries made in this department last year. To the casual observer this, no doubt, would indicate a falling off of interest, both in our workers and exhibitors; but when a careful view is taken of the matter it will be seen that the number of entries was greater than ever before, when a comparison of the rules governing the last and all former exhibitions is made. When it is considered that a rule excluding all articles that had heretofore drawn two premiums was strictly enforced, 163 entries less this year of the Fair than last will seem, and is, in reality, no falling off at all, but rather a very forcible demonstration of the fact that a truly fine and splendid exhibition can be kept up by ruling out old articles that have really become so familiar to visitors that all decent respect for them, and their creators, is killed. The strict enforcement of this rule is also a complete explanation of why the full amount of our premium estimate was not paid out. The same old quilt, counterpane, rag-carpet, shell-work, or whatever it may have been, that had been pensioned on our department for years, and drew as regularly as pay-day came around, was ruled out, and as a natural consequence not so many entries were made; but, gentlemen, the wisdom of instituting and enforcing this rule is not by any means as apparent now as it will be next year and in the future years to come. Out of strict adherence to it will grow future beauty, variety and freshness in the exhibits of this department—such beauty, variety and freshness as have never before characterized any of the exhibits of this department. The age demands that these very things *must* characterize exhibitions of all kinds whatsoever to insure their financial success. It should also be borne in mind that premiums were offered in our department for several new kinds of work, none of which was placed on exhibition. However, we have every reason to expect a full and fine exhibit in these new classes this year, and that the number of entries will exceed those of all former years.

FINANCIAL EXHIBIT

Of the Business of the Woman's State Fair Association for the
Year 1880.

Receipts.

From the State Board of Agriculture	\$1000 00
From rent of show-cases.....	16 00
Total.....	\$1016 00

Expenditures.

Premium orders.....	\$441 00
Diplomas.....	3 00
Awarding committees.....	46 00
Improvements and repairs.....	10 00
Supplies	14 69
Rent of show-cases.....	76 50
Stationery and postage.....	4 93
Labor in Woman's Department.....	9 00
Entry clerk hire.....	5 00
Traveling expenses of visitors to seven county fairs.....	9 80
Salaries.....	264 00
Total.....	\$883 92
Balance in treasury State Board of Agriculture	109 00
Balance in treasury Woman's State Fair Association	23 08

\$1016 00

STATEMENT OF COMPARATIVE EXPENDITURES.

	1879.	1880.
Premium awards.....	\$449 00	\$441 00
Rent of show-cases (150 ft.).....	59 00	200 ft., 76 50
Awarding committees.....	73 00	46 00
Improvements and supplies.....	100 00	24 69
Entry clerks	13 00	5 00
Labor of assistant superintendents.....	32 00	9 00
Stationery, postage and diplomas.....	No estimates.	7 93
Expenses of visitors to fairs.....	.....	9 80
Total expenses, excepting salaries.....	\$726 00	\$619 92
Salaries.. ..	100 00	264 00
Total expenses.....	\$826 00	\$883 92

A rule was adopted and enforced in our department, requiring all exhibitors taking show-case space to pay a reasonable rent for all room occupied over three feet. This rule worked admirably, and the utmost satisfaction to exhibitors having fine and delicate articles was the result. Thus you will see that by the judicious exercise of a little brain force we women have been enabled to economize in the matter of show-case expenses, although fifty feet more space of this kind was used for our last exhibit than for any former one.

The new rule respecting the manner of making entries was also found to be a wonderful help in simplifying and making easy this special kind of work; consequently not so many clerks as usual were required. Here, also, you will see a great saving growing out of economical methods.

It should not be forgotten that time, thought and labor have been freely expended by the women interested in the success of this department in order to systematize and classify all articles on exhibition in regular order and as the books were numbered; and we should also bear in mind that by having the work divided among efficient department superintendents, this matter of system has almost been made perfect. On account of such order and classification not near so many judges were needed, and a large saving was made in doing away with all but one man assistant. It will be seen at a glance that each class of work having in charge a responsible superintendent, places the whole exhibit under a supervision and guardianship equal to just so many efficient policemen in the prevention of loss and theft.

An unaccountable destruction of the show-case tables and other carpenter work in our department silently goes on from year to year, and when the work of repairing and replacing these missing tables, etc., is completed over and over again, we are politely reminded by *some* of the General Superintendents in their reports, "that it is to be hoped the ladies are now fixed up permanently in their department;" but, lo! when the tables are needed they are not there, all the same.

Only one article out of the entire exhibit has been reported lost, and it of minor value.

Of the one thousand dollars appropriated by you to carry on our department, one hundred and nine still remain in your treasury—which is the difference between the amount of our premium estimate and the amount of our premiums paid out. Gentlemen, concerning this \$109, I have just one question to propound—to whom does this money rightfully belong?

In submitting this report, I will suggest that for the good of our

department and all concerned, the Woman's Board be allowed to issue the premium orders from their department, and that they be empowered personally to disburse all money, except for premiums, appropriated to conduct their department, and also that the jurisdiction of the women over said department be most clearly and specifically defined.

I will here take the liberty to reiterate the suggestion made by Mrs. Adkinson in her report last year, namely, that in order to hold an exhibition of more than two or three days, the fair, instead of opening at the beginning should commence in the middle of the week. There are so many reasons, true and good, why this should be done, that I have no time now to enumerate them.

Of course, gentlemen, in submitting this report for your consideration, we wish to impress it upon your minds, that in order to prosecute successfully the work of this department, and advance the interests of our women exhibitors, an appropriation of money equal in amount to that appropriated last year, should be placed in the hands of the Woman's State Fair Association for this purpose, and it is earnestly desired, that in case you retain permanently the exposition grounds and buildings, that the sum of \$200 extra be appropriated us for the purpose of making useful, indispensable and permanent improvements in our department.

It now remains for you, after hearing the report of one year's trial of a plan of work which was accepted by you as an experiment, to give a full expression of your approval or disapproval of this plan, and to say whether it shall be carried out by our Board in another year's work.

AGRICULTURAL MACHINERY DEPARTMENT.

R. M. LOCKHART, *Superintendent.*

The display in the Agricultural Machinery Department was simply immense. That portion of the grounds allotted to the display of farm machinery was entirely inadequate to allow the exhibitors a sufficient amount of space to make a full and fair display of their goods. It is very gratifying to the Board to see the largest manufacturers not only of our own State, but many of the other States, attending each of our annual State Fairs.

It was a question in the minds of many of our members when the proposition was made to strike off all premiums in the mechanical department, as to whether the manufacturers would continue to make a display at our annual fairs. But it has been thor-

oughly demonstrated that all the manufacturers require is ample accommodations to enable them to show their goods properly, and they are willing to take their chances of making a better trade for their manufactures. Several of the largest manufacturers have already erected buildings at their own expense, in which they show their goods, and several more have made application for space on which to erect buildings before the next fair.

I think more space should be given to that department, in order to accommodate all who may desire to make an exhibit.

The great improvements made in machinery within the past twenty years have almost entirely changed the manner of doing the work on our farms, and it would seem as though no further improvements were possible. But each annual fair shows some new and useful inventions.

CARRIAGE, WAGON AND FURNITURE DEPARTMENT.

J. N. TURNER, *Superintendent.*

The largest, as well, perhaps, as the most interesting and important department of the Fair was the Mechanical; that portion of the department assigned for my supervision embodied the useful and beautiful, taking in a wide range of articles; consisting in part of carriages, furniture, upholstery, carpets, paper-hangings, willow and wooden ware, burial cases, etc., all of which reflected great credit on the skill and genius of the artisan; exhibitors were rewarded for their efforts by the admiration of thousands of visitors who daily thronged the avenues, and at every turn saw something to admire in the handiwork of the skilled workman.

Each annual exhibition brings with it indisputable evidence of the rapid progress and advance in mechanism; useful and labor-saving inventions are monthly presented to the public, keeping pace with the demands of this fast and wonderful age of improvement and progress, and the merits of these inventions are quickly recognized and as quickly utilized.

Many of the articles on exhibition deserved the special notice of the Committee, and their merits presented to the public in comprehensive reports that will do justice to the exhibitors; they are entitled to this "special mention" of articles, as no premiums are awarded in this department.

As a Co-Superintendent with Mr. Lockhart of the Mechanical Department, and as a member of the State Board, it is with pride that

we can present to the "Delegate Board" the report of another successful Fair. Although the receipts were not quite so large as in 1879 yet the exhibit was acknowledged to be superior, at least in many of the departments. The Presidential campaign detracted to some extent interest that would otherwise been taken in the Fair; this was predicted by several of the members at our business meeting of last February, but the result over-reached expectations, and we can congratulate President Ragan upon a successful administration, and can truthfully say to the "Delegate Board," although financially embarrassed the State Board of Agriculture is progressive and is entitled to a hearty support and co-operation.

The Superintendents of the following Departments reported verbally:

EDUCATIONAL AND ART DEPARTMENT.—J. A. WILDMAN, *Superintendent*.

GEOLOGY, NATURAL HISTORY, ETC.—PROF. JOHN COLLETT, *Superintendent*.

POWER HALL AND ENGINES.—W. B. SEWARD, *Superintendent*.
GATES.—JOHN P. BARNES, *Superintendent*.

AMPHITHEATER.—R. P. HAYNES, *Superintendent*.

PERMITS.—JACOB MUTZ, *Superintendent*.

The Chair appointed the committees from the delegates to act with the regular committees of the Board:

On Finance.—On the part of the Board: Messrs. Mitchell, Sutherland and Turner. On the part of the Delegates: Messrs. Ratliff and Davidson of Gibson.

On Rules and Regulations.—On the part of the Board: Messrs. Mutz, Meredith and Seybold. On the part of the Delegates: Messrs. Gilbert and Jackson.

On Fair Grounds.—On the part of the Board: Messrs. Quick, Custer and Barnes. On the part of the Delegates: Messrs. Lockridge of Montgomery and Lockridge of Putnam.

On Premium List.—On the part of the Board: Messrs. Meredith, Sutherland and Hancock. On the part of the Delegates: Messrs. Willey and Kirkpatrick.

On Unfinished Business.—On the part of the Board: Messrs. Lockhart, Haynes and Seward. On the part of the Delegates: Messrs. Graham and Riley.

On Geology and Statistics.—On the part of the Board: Messrs. Seward, Mutz and Cofield. On the part of the Delegates: Messrs. Elliott and Johnson of Marion.

Nominations of candidates to fill the places of the retiring members of the Board, being next in order, the following named persons were placed in nomination :

Fifth District—T. W. W. Sunman of Ripley and D. F. Willey of Clark.

Sixth District—S. R. Quick of Bartholomew.

Eighth District—Joseph Gilbert of Vigo and Dempsey Seybold of Clay.

Ninth District—W. H. Ragan of Hendricks.

Tenth District—N. R. Elliott of Henry and H. C. Meredith of Wayne.

Eleventh District—Nelson Pegg of Randolph, J. P. Barns of Madison and Geo. W. Miller of Jay.

Twelfth District—J. K. O'Neal of Tippecanoe and Henry La Tourett of Fountain.

Thirteenth District—John N. Turner of Grant and Capt. T. M. Kirkpatrick of Howard.

Dr. R. T. Brown, of Indianapolis, was then introduced by the President, who proceeded, as per published programme, to read an interesting address on the "Review of Agriculture in Indiana," which was followed with discussion by Mr. Woods, of Lake, Dr. Brown and others.*

On motion of Mr. Mutz, Secretary Heron read report as delegate to the Inter-State Agricultural Convention, held at Springfield, Illinois, last November.

To the Indiana State Board of Agriculture,

GENTLEMEN:—In response to a call for a meeting of representatives of the Boards of Agriculture in the Western States, at Springfield, last November, your Board was represented by the Vice-President, Mr. Sample, Dr. Brown (by special invitation), and your Secretary.

* All of which will be found published elsewhere in this report, under the head of essay matter.

The object of the meeting was to adopt some uniform system of collecting and reporting the crops in season, in the district embracing the principal grain and meat producing States. There were seven States represented by twenty-five delegates, being the first meeting of the kind—and will no doubt be productive of good results.

Indiana was honored by the selection of the presiding officer, Dr. R. T. Brown, who also furnished an appropriate paper for the occasion, the subject being "The relation of State Boards to the National Department of Agriculture," which was read by him and attracted much attention and comment.

A paper referring to the agricultural interest in Indiana was read by your Representative. Several other papers on different subjects were read, producing general discussion and ending with a series of resolutions. [Herewith omitted, as the same are included elsewhere in this volume, in the proceedings of the Inter-State Agricultural Convention.]

It may be well to make the distinction between the terms "crop reports" and "statistics," although of the same nature. Crop reports are statements based on an estimate of percentage formed by a compilation of individual opinions.

It is proposed to have for Indiana at least quarterly crop reports, in addition to the annual statistics as collected by the Assessors and the Bureau of Statistics, the object being to get reliable information as to the crops produced, to the farmers, in the least possible time. With us, this can be done by and through the Bureau of Statistics, conjointly with the Board of Agriculture, and requires some consideration at your hands.

It is also specially desired that you give expression as to forming a permanent organization of the Boards of Agriculture to co-operate for mutual interests.

Respectfully submitted,

ALEX. HERON, *Secretary.*

December 4, 1880.

Motion of Mr. Sunman carried, that the report be received and placed on file.

Motion of Mr. Riley carried, that the President's address, or so much as referred to premium list, be referred to the committee on premium list.

Motion of Mr. Lockhart carried, that a committee be appointed to consider the suggestions of the Woman's Department, and report to-morrow morning. Messrs. Lock-

hart, Willey, Gilbert and Elliott, of Henry, were appointed such committee.

Upon motion, a committee consisting of Messrs. Heron, Mutz and McDonald, was appointed to consider the suggestions in the report from the Inter-State Agricultural Convention.

On motion, recess was taken until 7:30 P. M.

EVENING SESSION.

Convention met, President Ragan in the chair.

The committee on resolutions, in regard to the death of Governor James D. Williams, ex-President of the Board, reported by the chairman, Dr. Brown, the following, which was adopted by a rising vote:

Death has made another vacant seat in this hall. The familiar face of Governor Williams will be seen no more in our councils. He has gone from among us by the inevitable road that we all must travel; but he went not till his work was done—his task accomplished. He went full of years and full of honors. Not the least of these honors was his life-long and faithful labor for the promotion of agriculture in all that related to its profit as a business and its dignity as a profession. Not even the allurements of politics, nor the fascination of office, could wean him from his early attachment to this pursuit.

As a feeble tribute to the memory of his worth and of his labors with us, be it,

Resolved, That a record of the death of Hon. James D. Williams be conspicuously made in the journal of the proceedings of this Board.

REMARKS BY DR. A. C. STEVENSON.

The late Governor Williams, long a member of this Board, has been removed by death from our midst. He was an honored and worthy member of this Board—cheerful, conciliatory, and a safe counselor, and universally beloved. In his death we have sustained a loss, the State has sustained a loss, in so good a man. Although we feel the loss, we should not repine at the decrees of a wise and beneficent Providence; still there are relations of consanguinity

that render these bereavements most distressing—the loss of a parent, a child, brothers, sisters, or other near relations, where heart is bound to heart by the mysterious cords of love. So strong are these ties that the intellect and life itself are often not able to withstand their severance. A very affecting illustration is recorded of David and his rebellious son Absalom, who had raised an army to overthrow his father's government. David's troops, under Joab, had gone out to meet Absalom in battle. It will be remembered that David gave instructions to spare the rebellious son, and his inquiry of the first messenger was, "Is the young man safe?" Of the second messenger the only inquiry was, "Is the young man safe?" The messenger answered, "Let all that rise up against thee to do thee hurt be as this young man is." And David wept, and thus he said, "O my son Absalom! my son, my son Absalom! would to God I had died for thee, O Absalom, my son, my son!" Such feelings only flow from noble and generous hearts.

The manifestation of affectionate regard by the late Governor Williams for the loss of his beloved wife was rather remarkable, especially on the occasions of his visits from the capital to his home. Memories of the past fast crowded upon him. Here was the house in which they had so long lived and labored together. Her vacant chair stands in its place still. At the generous board, where she had so long and generously administered to the wants of the family, she is seen no more. Here in her own private room, where the evenings had been so pleasantly spent in social converse, is her work table and the work basket with its implements—the needle work, the thimble, scissors, the unfinished knitting neatly rolled up and laid in its place, just as she had left it. These press drawers contain her clean, bright garments, ironed and folded away by her own hands; and as an evidence of her affection, she has laid close by her husband's new home-made garments. In the yard are the gentle birds that she fed from her own hands. In adjoining fields are the beautiful cows which furnished her table with rich milk and delicious rolls of butter. On every hand are seen reminders of his affectionate and beloved wife. The tears that are spoken of as having been often seen bedewing his aged cheeks are no evidence of weakness, but on the contrary they are the evidences of a sympathetic heart—of generous and noble impulses. Nor were those generous impulses ever abated by the honors conferred upon him by his own county in making him a member of the legislative body of the State, or his congressional district in making him a member of the highest legislative body of the nation, or his State in making him its chief Executive. Even the garments made by her hands,

the beautiful jeans of wool from his own flocks, were worn to the last, notwithstanding the many imputations he received on that account.

But aside from these very natural and worthy sympathies of consanguinity, death is to be looked upon as a proper and wise assignment to man; it is appointed once for all men to die, and in reverence should this decree be accepted. Man's days are limited to a short period—three score and ten—and if beyond, it is sorrow and pain. This short life is doubtless a blessing to our race. Not that God has made this an unpleasant place for man; on the contrary he has made it most delightful. Ample provisions for his physical and mental wants have been provided; a land producing fruits, vegetables and cereals, flocks and herds, for man's sustenance and comfort; whose waters also administer to his food supply. Mental supplies may be had from the book of nature open before him, in hill and dale and towering mountains; in forests green; in shrub and flowering plant; in rivers, lakes and broad oceans; and the myriads of living animals that inhabit both land and water. These things God has richly provided for our comfort; still Divine Wisdom has found it for man's good that his existence here should be but for a limited period. It is a restraint upon man's evil propensities and evil passions. Divine Wisdom, foreseeing this propensity of the human will to evil, has very wisely placed a restraint upon man's wicked actions by holding before his eyes death.

In this bereavement we have a lesson it would be well to profit by. Although we are sad, yet we rejoice in the promises that are sure of fulfillment to the good. Sympathizing friends may be consoled with the thought that after a long life of over three score years and ten, that change has been a glorious one. "Mortality has put on immortality, and corruption incorruption;" and although the pleasures of this life to the just are the dispensations of a kind Benefactor, yet he reserveth still greater for the life that is to come.

Governor Williams was born in Ohio in 1808, and moved to Knox county, Indiana, with his father in 1818; he was consequently only ten years old when he landed in the wilds of Indiana. Here he lived and received a common-school education, such as was common in those days, and assisted his father in improving a farm. With a vigorous and observing intellect, he was soon regarded as one of the leading men of his county in regard to the business qualifications necessary to make him a successful leader. His ability and worth were not long concealed. He was early called to the discharge of public trusts, and the fidelity with which they were discharged continued him in public life until his death. Fine opportunities enable some to become great and good, and very justly

receive the admiration of all who know them. But much more deserving are those who, with poverty, a limited education, and a hundred other privations, become equally great and good. By industry, frugality, and a wise management of his business as a farmer, he accumulated a handsome fortune, and in addition to this he served his State as long and as faithfully as any man in it.

And here we would be pleased to stop were it not for some harsh criticisms which appeared in an obituary notice by a New York leading journal. The journalist was probably sincere (I would be unwilling to accuse him of insincerity) but at the same time greatly mistaken. I think it, therefore, the more necessary that I should at least enter a protest to the sentiments there expressed; others there may be laboring under similar errors. The following may be taken as a sample of the article:

"The late Governor Williams, of Indiana, belonged to a class of public men that used to be somewhat numerous, but has steadily diminished with the spread of intelligence—men who seek to attract attention and votes by some singularity of dress. Of late years Governor Williams was perhaps the most conspicuous example of this class. He was a man of mediocre intellectual ability, and it may fairly be said that he owed his election to Congress and his subsequent election to the Governorship of Indiana to his habit of wearing clothing made of "blue jeans," a coarse fabric made of mixed woolen and cotton stuff, much worn on account of its strength and cheapness by the poorer class of country people in the West and South. There was nothing in his circumstances which induced him to adhere to this serviceable and inexpensive sort of attire. He was a wealthy farmer, owning two thousand acres of fertile land and reputed to be worth the snug sum of \$100,000. He might have arrayed himself in the best broadcloth and cassimere, but he was ambitious of political honors, and his "blue jeans" suit was worn to identify him with the class of poor farmers, to which he did not in fact belong, and to gain their support. He rose into prominence during a period of industrial distress and business prostration. He shrewdly calculated that in such a time his homespun clothes would be accepted as representing simple habits and a desire for economy in public and private expenditures. * * *

He had no gifts as an orator or a writer, and no ideas concerning government save that a cheese-paring economy should be practiced in all its departments. When in Congress he chiefly interested himself in the expenses for soap and towels. * * *

When an ambitious politician of ordinary abilities dresses in a way to attract attention and comment, he advertises himself to all sensible people as a demagogue."

That the late Governor Williams wore a coarse fabric of cotton and wool, worn by the poor class of country people, called jeans, merely to enable him to succeed in politics, is gratuitous and injurious to his memory. He was born and raised and passed his early manhood when the article spoken of was the almost universal

wear of the agricultural class of this country, and was home manufactured. Fifty years ago the big wheel occupied a conspicuous place in every farmer's parlor. Here the roaring of the wheels might be heard from early morn until late at night. The little wheel occupied a place near the hearth where the older ladies worked, whilst the younger ladies plied the big wheels. Upon the further corner of the hearth might be seen a large kettle containing the coloring material, blue dye, and not unfrequently the extract of walnut bark. In a separate building stood the loom generally; but if the weather became very inclement before the cloth was all woven, the loom was sometimes moved into the parlor for a few weeks for finishing up the work. When the webs were finished, the girls scoured them and the mother colored, as might be known for the following six months by her blue hands. The cloth was then cut and fitted and sewed into garments by the mother and the daughters. Thus was your Governor clothed, doubtless. The ladies of the household made the garments, whilst the boys fed and cared for the flocks that yielded the wool, and did the farm work generally. He was a farmer in the days of log-rolling, house-raising and barn-building. Men and women of worth were the product of these times, and here Knox county, under just these circumstances, found a representative, dressed in his farmer garb of blue jeans, made, doubtless, by his wife. Here, too, the congressional district found a safe representative, and the State a governor, still wearing his farmer suit of jeans. Did he wear his farmer's suit of jeans at home before his first promotion to office, to obtain promotion? If so, then the farmers of Knox county generally may be accused of the same thing. He wore the garb of the class to which he belonged—was not ashamed of it, nor of his class. But it is claimed that he should have put off his jeans and put on fine broadcloth, and as he did not, the inference is that he was of "mediocre intellectual ability." I will not be contradicted when I say that it is not the dress that makes the intellectual man, or the man of worth. His worth would have been much less esteemed, and justly so, had he, upon his first election to the legislature by his county, assumed *airs* and laid aside his nice jeans suit, and dressed himself in fine broadcloth. His firmness in standing by the habits in which he received his first promotion is highly commendable and evinces true worth rather than otherwise. His ability and fitness for office are well assured by his repeated promotions by those who knew him best and really needs no defense here by me. He is also charged with being cold, selfish and saturnine. An anecdote may well illustrate his pleasantry and his love of fun, which shall be my only answer to this charge.

Soon after the introduction of the sorghum or Chinese sugar cane, there was exhibited before this Board some beautiful samples of syrups, the product of this plant; also two samples of sugar, very nice, one brown and the other white; also a good sample of vinegar and a bottle of rum. "Mr. Williams, there is damage to the democratic party in this (I remarked); sugar and syrups will soon be made in every State sufficient, at least, for home consumption. The southern sugar interest will suffer great loss—poverty will follow; and as the south is the main support of your party, the whole will likely be crippled and you will all go down together." He sighed audibly, but, seemingly to recover, reached his long arm across the table and slowly raised the bottle of rum above his head that all might see. "Here, gentlemen, upon this plank the democratic party can safely swim when sugar is made in every State in the union." With a peculiar twinkle of the eye he set down the bottle.

I am free to express the opinion that the country would be much benefited were there more plainly-dressed public men than are to be found in office at this time. Men of worth are rarely distinguished by an exquisite toilet. Persons who desire to appear for more than they are, resort to this as an easy way to obtain it. Pride and show and luxurious habits are too often the downfall of individuals and nations. In this respect our late governor has left us a good example that we will not lose by to imitate. This State Board of Agriculture, of which he was so faithful a member, will long cherish his memory; and in assembling here upon this occasion to honor his memory, tender, at the same time, this Board's most heart-felt sympathy to the members of his family.

REMARKS OF HON. I. D. G. NELSON.

Mr. President, Members and Delegates

of the State Board of Agriculture:

But little will be expected of me that can add interest to what has already been so well expressed in the preamble and resolution, and so appropriately commented upon by others, therefore I will not detain the meeting with any extended remarks. I have simply come to mingle my sorrows with yours, and say that it is most fitting and eminently proper that this State Agricultural Board should place upon its records suitable words of respect to the memory of one whose whole life has been so well employed in developing the agricultural resources of this now great and prosperous Commonwealth, and who has been for so long a period identified with the transactions, interests, growth and usefulness of this Association.

Governor Williams had an abiding faith in the belief that the prosperity of any country or people depended mainly upon the success of agricultural pursuits. Hence, he was ready at all times to prove his faith by his works. Thus, it was to his influence more than to that of any other man (being Governor of the State at the time), that material aid was furnished by the Legislature in the darkest hours of the financial peril of this Association. I know whereof I speak, acting as I did in concert with him, your efficient Secretary, and other zealous friends of the cause.

I have served with him officially on this Board, in the halls of legislation, and more recently, and at the time of his death, in a still more important public trust, and always found him the same genial, honest, faithful, pains-taking co-worker in every position.

Although deprived of the advantages of an early education, except such as the primitive log school house furnished, which was his graduating college, as he expressed it—and other facilities for obtaining literary knowledge poor—still, all the avenues to general information were not closed to him altogether. From his inquiring turn of mind he soon became a great newspaper reader (the great public educator of the masses, as it unquestionably is), and quickly became better versed in political economy and the affairs of State, especially its finances, over which he kept a careful watch when in a position to do so, and for which he was more noted than most men of his day. Accordingly, he was frequently called from the plow to the councils of State, where he always sustained himself so well, that after a brief experience he was considered one of the best parliamentarians in either branch of the Legislature. So well did he stand, that on one occasion he received the unanimous nomination and support of his party for United States Senator, in opposition to Governor Morton, and at the next session of the Senate an unusual and extraordinary compliment was paid him by his political opponents, by making him chairman of the Committee on Public Accounts.

It was in the Legislature of 1852-3 that I first became acquainted with him. During that tedious session of nearly six months he was one of ten or twelve out of the one hundred and fifty members of the two Houses who met in the hall of the House of Representatives every Friday evening to discuss agricultural matters. The proceedings of those meetings were regularly reported for the next morning papers by Lewis Bollman, Esq., who was also an active participant with us, and who is still living I think: besides whom, I believe, there is not another.

Those discussions attracted as general attention and were published as extensively in and out of the State, especially in agricul-

tural papers, with as much apparent interest as if the proceedings had emanated from the Legislature. Various agricultural topics were discussed pretty fully, but the importance of the grass crop to the country and the comparative value of the different varieties were among the chief subjects of discussion. The great value of clover as a renovating crop was generally conceded, but blue grass was Governor Williams's special favorite as a permanent stock-fattening pasture, which idea he adhered to up to the time of his death, claiming that it was the farmer's gold mine and banking capital; and no man knew better than he how to "make two blades of grass grow where but one grew before," or how to insure more profitable returns to the farmer than he did, as his successful career as an agriculturist abundantly demonstrates.

The continuance of our friendship was warm and most intimate, closing with the last days of his illness, and assisting to bear his remains to his own county, where his townsmen and friends claimed the right to receive it and complete the last obsequies of burial, which were performed by them in a most becoming manner.

Although much in public life, he never forsook his faith in his profession, but always returned to the farm as soon as relieved from any public trust. Neither advancing years, nor the labors of chief magistrate of the State, prevented him from giving personal attention to his large estate at his native home, and he looked forward to the day with much satisfaction when he would be relieved from the cares of State, and be again permitted to devote his declining years to his favorite pursuits.

Governor Williams always had a warm side for the pioneers of the country, for he was one himself, and was wont to attend as many of the "old settlers' meetings" in all parts of the State, as his official and other duties would allow. On these occasions he was peculiarly felicitous, being always ready with a fund of anecdotes, quaint and interesting incidents, calculated to refresh recollections of early days, by reciting youthful sports, intermixed with trials and hardships of rural life among frontier settlers, that brightened the eye and seemingly restored the glow upon the fading cheek, and renewing imaginary youth to many aged men and women present on such occasions.

Governor Williams was also a politician of pronounced views but exceedingly lenient and charitable to others, and never carried his politics into the social circle, or introduced it in any objectionable form, or took advantage of his position to advance favoritism or gratify dislikes. No persons knew his views or his course in this particular better or so well as those of the two leading political parties recently associated with him in a most delicate and responsible

position, where he could have exercised his authority in a most potent manner, but which he scorned to do, because it was a confiding trust of both parties—a trust that no man can be found so mean as to charge him with betraying.

His natural warmth of heart, and yet stern determination to deal conscientiously between the State and individuals, was exemplified all through the Governor's term of office. The right to exercise the pardoning power upon application and petition was the great trial of his official life, and gave him tenfold more anguish and anxiety, as he said, than all the other responsibilities of that Department. But notwithstanding the ingenious and sometimes extraordinary pressure brought to bear upon his kind nature, he always weighed well the duties he owed the State when considering the appeals for mercy, which were almost overwhelming at times, and although yeilding perhaps in a few instances to false and delusive representations, accompanied by pledges and assurances of reform, which greatly grieved him, his record of pardons it is conceded will compare favorably with that of any of his predecessors.

He was a close observer of character, a good judge of men, and was seldom deceived. He liked to reward merit and was ever true to his friends; but he had no use for sham pretenders, nor "dead beats," of any kind. They were never seen loitering about him. His life may truly be said to have been one of untiring industry and stern activity, as well as one of economy and carefulness, which resulted in a well filled garner, but not at the cost of other men's toil or by any other dishonest means.

In James D. Williams's successful career we behold a prodigy. We see a plain, unassuming young man, a stranger without friends or money, standing on the bank of White river, the largest tributary of the far famed Wabash, with ax upon his shoulder in the midst of a boundless forest. We look again and see the forest melting away as if before fire; a little further along the tidal current and we see boundless fields of waving grain and "cattle" not "upon a thousand hills," but a thousand cattle are seen grazing upon his luxurious "Wheatland" pastures, to feed the starving millions in our own and other lands. We also see mills erected, river boats built, and pork houses constructed, without the aid or having trouble with competing architects, contractors or builders, as he was the artificer and boss workman himself. We see trade and commerce springing up with New Orleans the great southern mart of the Wabash valley, and we see the same ax-man, farmer, miller and boat-builder, now the captain and trader successfully coasting along the Mississippi to his destined port of entry and traffic. We follow him back to his forest home, where he becomes a politician, if he may be so considered,

but he is a stranger to political trickery or the wiles and machinations of demagogues, free from deceit and dissimulation, rising step by step, quietly and unostentatiously, until it may be said he has reached the topmost round of the ladder of a laudable ambition—a position that others have sighed for and vainly sought to reach by traveling over rugged paths and devious ways; and at last, unsought, he reaches the pinnacle of fame, the chief executive of his own loved Indiana. He lingers for a time after having reached the full number of years allotted to man, and wraps the mantle of gratitude, love and charity about him, and quietly lies down to take his final rest and sleep that knows no waking, upon a bed of laurels whose beauty and fragrance will never fade or die.

The successful career of this plain, industrious farmer, without the advantages of wealth, culture or prestige of friends in early life teaches a most valuable lesson to the young man of the present day, a lesson taught in no public school or college in the land. May we not be allowed the cheering hope that in the ranks of the agriculturists of this State, many will be found in the future to imitate his noble and praiseworthy example.

REMARKS OF DR. R. T. BROWN.

I want to say that among the early patrons of agriculture and of its organization in the State of Indiana we are proud to number Governor James D. Williams. I knew him as a worker in this field from the early days of the State Board of Agriculture, and he went into this work under very different auspices from those that surround us to-day. In the period of forty years ago even the business, I can not say the profession, because it had no professional character at all, but the business of agriculture was considered as the last one in the class of business. If a boy showed a great deal of sharpness and shrewdness and tact, they made a lawyer of him; if he was asking the reason of everything, he was made a doctor; if a serious boy, and inclined to be pious, they put him in the pulpit; if he was an ingenious boy and skillful, they made a mechanic of him; but if good for nothing else they made a farmer of him. That was the condition of things, and I don't exaggerate. Agriculture was of no reputation at all. It was made up of the people who were supposed to be good for nothing else.

Now that a man of the native common sense of Governor Williams—for whatever you may say of him he had a large share of good common sense—that a man of his ability should take himself to the plow and maintain it even after the country had honored

him by position in the councils of the State and nation, was greatly to his credit. He would sit in the Senate in the winter time and return to the plow in the spring. When the effort was made in the days of Governor Wright to organize agriculture as an organization in Indiana, he was among the early men that stepped out in the ranks. I sympathize with him because I know how it was myself. I have been there. I know the laugh and sneer of farmers themselves when you talked of making farming a science. We had a great mass of ignorance before us at that time, and we were attacking that ignorance. In every army there must be a picket line when it is moving in an unknown direction, but ahead of that picket line goes a corps of miners and sappers. They look out the road and indicate the route of march, but are never known when it comes to bestowing honors. Theirs is a position of labor and danger. Governor Williams belonged to the line of miners and sappers that went before the army. He stood at his post until the day of his death. He made agriculture his business and pride, and lived to see the time when it became an intelligent occupation; intelligent, because at the time that Governor Williams took hold of this matter of organizing it forty years ago, there was no such thing in this country as a book upon farming. I know I was over twenty-five years of age before I saw an agricultural newspaper or a book upon agriculture of any kind. It was not thought worth while to write anything about it; indeed, the first publication that got to our people at all, upon any branch of agriculture, went through the early volumes of the reports of this State Board of Agriculture. I got hold of Sir Humphrey Davy's Agricultural Chemistry forty years ago at Cincinnati, and thought it a great prize. Now the country is full of agricultural books. What is known of farming is written now and can be known by anybody. That change came during the time that Governor Williams labored in this field. Among his highest honors was the honor he acquired by maintaining persistently his hold upon the early pursuits of the field and agriculture, and he didn't abandon it for congressional honors, or even after being elected chief executive of the State. He maintained it and gloried in it to the last of his days.

This demands from us, considering the period through which he passed, the highest tribute of our respect and regard, and I hope we have it in our hearts, all of us.

The following letter was received from Mr. Hamrick, an ex-President of the Board :

HAMRICK'S STATION, Dec. 28, 1880.

HON. ALEX. HERON: *Dear Sir*—Your friendly invitation to meet with the Board of Agriculture, on Tuesday morning next, and participate in the memorial services of our late and distinguished ex-President, James D. Williams, came to me a day or two ago. I am always glad to meet with your Board, and to greet old friends with whom I have been associated and labored in the days that are past, and it will afford me on this occasion very great pleasure if it shall be in my power to comply with your friendly request; but my health for the last few weeks has not been good, and it may not be in my power to be with you and participate in the services of the evening, but I am glad to learn that the Hon. A. C. Stevenson and Dr. R. T. Brown are to be with you. The ripe experience and acknowledged ability of these old members will doubtless afford you a rich treat.

I am one that has always had a very high regard for the State Board of Agriculture, and especially its working members, and our departed brother was eminently one of these. The general public can hardly realize the loss when one of those men depart whose active lives and untiring energies have been spent in the services of the people, and I very much fear our people, and especially the business portion of our people, never have and perhaps never will realize the great advantages resulting from the Board of Agriculture. In looking back over the history of Indiana for the last twenty years, we see her with her great storehouse of vast resources lying dormant, *unknown, undeveloped, unacknowledged*; her rich and inexhaustible mines of coal and iron and stone, and clay and timber, their very existence *denied*, and our people plodding on in the even tenor of their way, without much desire or expectation. A feeble effort had been made to develop these great resources, but for want of proper control and direction had signally failed. But still a few men of the State Board of Agriculture held steady in the belief that these great resources in unlimited amounts existed in our midst. These men, unwilling to relinquish the effort, made an appeal to our Legislature to undertake this great work. I happened to be a member of both at that time, and well do I remember the effort to induce that body to undertake the work; but energy and perseverance finally prevailed, and a law was passed giving the whole work into the hands of the State Board of Agriculture, and appropriating the money to commence the work. I shall never forget the hesitancy and responsibility felt by the Board

at that stage of proceedings. An effort had once before been made and failed, and knowing that to fail now would be final, it became important that no mistakes should be made in the beginning. (And here let me acknowledge the obligation some of us were under to Dr. R. T. Brown, for valuable suggestions in regard to the proper mode of proceeding at our very beginning.) But with no desire on the part of the Board to shirk the responsibility, they proceeded at once with the work. First, a Geological Department had to be organized, with an office and all necessary apparatus; then a Geologist had to be appointed; all of which was soon provided for, and the work was immediately commenced; and you remember, doubtless, the effort it required to induce men of experience, skill and capital to visit our State and examine our resources. But the right men from abroad came, saw, tested, experimented, and were convinced, and invested, and thus a successful beginning was made, and a business and general prosperity began that is still extending its arms and its blessings throughout all our broad land, furnishing employment and scattering its blessings upon thousands of our fellow citizens.

In comparison, let us look at Indiana as she stands to-day, with her furnaces, her forges, her foundries, her machine shops and her factories, some of them not excelled in their line in the world, and all the industries of the State actively employed, furnishing the needed supplies for the increasing demand of the public. From my own door, on the Vandalia, I can view more than thirty trains each day passing, most of them loaded with coal to furnish motive power to our numerous factories, and the factories of neighboring States. To all this I claim that this present and unparalleled success is mainly due to the labor and work of the State Board of Agriculture. But while the Board has been actively engaged developing her mineral resources, it has not failed to afford every necessary aid and encouragement to the great agricultural and mechanical interest of the people. The improvement and cultivation of the soil; the introduction of the best grains, seeds, fruits and plants; the improvement and distribution of the best and most useful farm implements, with the necessary aid and encouragement for the importation and improvement of the best stock to be found—all these in their multiplied forms have been furnished with all the aid and encouragement in the power of the Board, so that their Annual Fairs have equaled, if not excelled, the Fairs of any State in the west. It is not surprising, therefore, that the Board, in the multitude of its work, and in its great anxiety to lend a helping hand to the industry and enterprise of the people, has gone too far and finds itself embarrassed with an incumbrance that may interfere with its use-

fulness in the future. In that case it is certainly desirable and proper that the legislature should promptly furnish what aid may be found necessary, and it seems to me that if you will select a committee of two or three competent men, they certainly could secure what necessary aid may be needed.

And now, Mr. Secretary, in conclusion, allow me to say, that knowing from experience how much the success of the Board depends upon an efficient and faithful Secretary, allow me to congratulate you upon your eminent success in serving your Board, and especially during the year when so much was to be done. May we not fondly hope that your future connection with the Board may be as useful and as pleasant as it has been in the past. Returning you my sincere thanks for the many tokens of respect you have so often given me, I subscribe myself,

Very sincerely yours, A. D. HAMRICK.

Prof. C. S. Ingersoll, of Purdue University, then read a well prepared address on "Forestry," which was received with thanks, and brought out considerable discussion.*

On motion, adjourned until 9 o'clock A. M.

SECOND DAY.

MORNING SESSION.

WEDNESDAY, JANUARY 5, 9 O'CLOCK.

The Board met pursuant to adjournment, President Ragan in the chair.

Present, Messrs. Mitchell, Haynes, Hancock, Cofield, Quick, Mutz, Seybold, Ragan, Barns, Sample, Custer and Lockhart, and about two-thirds of the delegates.

The minutes of yesterday's proceedings were read and approved.

The President declared that motions were now in order.

* The address, with remarks, will be found elsewhere in this report, under the head of essay matter.

Mr. Hopping. The proceedings of the Board yesterday, according to the News, was unwarrantable in respect to the delegate from Dearborn county. The Board took the liberty to appoint a delegate from Dearborn county who is not even a member of the Board of Dearborn county, and the society has not been reported to the State Board of Indiana. I therefore make the motion that that part of the proceedings be expunged from the record of proceedings.

Mr. Sunman. I would like to say that the society is a new organization, and did not understand about sending in their report. At the time I asked the Board's permission to admit Mr. Murdock, he informed me that he was a director of that organization. I also said that if it was necessary to have a telegraphic order authorizing him to act, that he would get that order, but the Delegate Board saw proper not to request that, and admitted him to membership. You accepted him as a member yesterday, and I see no reason why he should be rejected to-day.

On motion of Mr. Gilbert, the motion was laid on the table.

Mr. Mitchell from the Finance Committee reported as follows, which was accepted:

To the State and Delegate Board of Agriculture:

We, the Committee on Finance, beg leave to make the following report: That we have examined the books and accounts of the Secretary and Treasurer, and find them correct.

ROBERT MITCHELL,
JOHN N. TURNER,
JASPER DAVIDSON,
JOHN RATLIFF,

Committee.

Mr. Mutz reported from the Committee on Rules and Regulations as follows:

That the price of admission be as follows: Single admission, 50 cents; children under twelve years, 25 cents; horse and rider, 75 cents; one-horse vehicle and driver, 75 cents; two-horse vehicle and driver, \$1.00. We also recommend the charge of 25 cents to

be made for badges for admission to the space opposite the amphitheater. We concur in the recommendations of the President in regard to beginning the Fair the middle of the week and ending on Friday of the week following.

JACOB MUTZ,
JOS. GILBERT,
C. B. JACKSON,
DEMPSEY SEYBOLD,
Committee.

It was moved that the report of the Committee on Rules and Regulations be concurred in, which was carried after the following discussion :

Dr. Stevenson. The recommendation is now made to put the admission fee at fifty cents. I presume the object is to raise the premiums and increase the funds of the Society. The question for the Board to consider is, whether or not we would make more money by increasing the fee. I have my doubts as to whether it makes more or less money to increase the fee.

Mr. Mutz. As a member of the committee I will state the reasons why we made the increase in the price of admission. Indiana stands second to no other State in the Union as far as her agricultural resources are concerned ; she stands second to none in the way of her mechanical arts ; she stands second to none as a stock-raising State. We stand second to no State for giving the people a fair worth attending, and we have spared no pains in making the visitors to the State Fair comfortable, and yet, when you look abroad, there is no State Fair in the United States but what charges fifty cents admission. Take away Indiana's agricultural resources and what is she ? Look at the benefits that result from the exhibitions made in Indiana, and compare them with the prices that people have paid towards sustaining the State Fair of Indiana. Look at the other States, and see what their Legislatures have done in regard to building up the agricultural interests of their States. I think we have abundant reason to raise the ad-

mission fee. We are in debt now. I think the people of Indiana are prepared for an increase in the price of admission, when they look abroad and see the prices in all the other States.

Mr. Seward. Mr. President, I am very glad that you, in your annual address, recommended this change. I have been an advocate of this increase of price for the past six years. When you hear the reports of the various departments, it is with one accord that they ask for an increase in the premiums in their departments. I must acknowledge, as a member of this Board, that I am ashamed of the pitiful premiums that we offer. We know by past experience about how many people we can depend on who attend our fairs, and we also know what the average expense is for conducting this fair, and every member of this Board, who has investigated this matter, knows that we can not increase our premiums at the present rate of admission. Let us fix our rate of admission at such a figure that we will be able to increase our premiums and yet not lose money.

Mr. Custer. I indorse all that has been said in respect to raising the price of admission. I simply wish to show a comparison in the fruit division of the Horticulture department. Taking the fair previous to the last one, I wish to show the figures for Ohio, Michigan and Indiana. Ohio pays premiums to the amount of \$371, Michigan \$712, and Indiana \$173, Indiana not half as much as Ohio, and only about one fourth as much as Michigan. Indiana does not want to acknowledge that these other States are so much superior to ours in fruit growing.

Mr. McDonald. I am in favor of increasing the price of admission to the small sum of fifty cents.

Mr. Beeler. We should certainly raise the premium list. I do not know how to do it without increasing the fees. Having been connected with the Fair during the last year, I have given this matter considerable thought, and I believe that a half-way ground in the matter would be a good

thing to adopt, that is, that you would make Monday, Tuesday and Saturday twenty-five cent days, and Thursday and Friday fifty cent days.

Mr. H. S. Byers. I concur fully with Mr. Beeler's plan.

Mr. Johnson. I differ with those gentlemen in regard to making a difference in the price of admission on different days. I think, if you make that the rule, that on the fifty-cent days there would be a very meager attendance. My judgment would be that the days should all be alike. What you want is what the people think in the country. Our fairs are supported by two classes of people—one who come for the benefit of the State Fair, and because they want to support it, and another class that comes from mere curiosity; the two classes make up your attendance. What the people throughout the country want, is to know whether the Fair is managed economically or not. If they can be convinced, by any report you can make, that the money is properly expended, they will not stand back for fifty cents. My judgement is, that you can remedy this matter by making arrangements with the railroads and hotels for reduced rates; I think that it can be arranged so that the fifty cents will be saved to them. There is another item by which you may save money, and that is not admit too many dead-heads; let everybody that comes to the Fair pay alike. Everybody is aware that the State Board is in debt, and they know that we are trying to get out of debt. If they are convinced that their money is being properly expended, they will not stand back for fifty cents.

Mr. Raltiff, of Grant, offered the following resolution, which, on motion of Mr. Elliott, was made special order for the afternoon, immediately after the election of officers:

WHEREAS, The grounds occupied by the State Board of Agriculture are mortgaged for the sum of sixty thousand dollars, which mortgage is now due; and,

WHEREAS, The State Board is wholly unable to pay said mortgage and,

WHEREAS, The State Fair is for the benefit of the people of the State, and not for the benefit of any corporation or individual; therefore,

Resolved, By this delegate meeting that the State Board proper be instructed to appoint a committee of three from their number, to properly present this matter to the Legislature, and ask for such relief as our very needy circumstances require.

Adopted.

Mr. Ratliff. I understand that this debt was incurred when the exposition was run in connection with the State Fair, and that you are wholly unable to pay it. I understand also that the State has already some twenty-five or thirty thousand dollars invested there, secured by a second mortgage, and that there is a prior lien on the property. I think it is nothing more than right that the Legislature be urged to take hold of the matter and put it in some shape so that it may be kept out of the hands of the persons holding the first mortgage.

Mr. Seward. This is a matter of too much importance to be passed very hastily. I would like to have a free expression from the delegates. I undertake to say that the State Fair is for the good and benefit of the individuals of the State of Indiana. As we are an agricultural State, and depend on agriculture largely for our wealth, I think it ought to be the duty of every delegate to make it his business to see the representative from his section and urge upon him the necessity of some action of the Legislature to relieve us from our embarrassment. It is impossible for the State Board of Agriculture to extricate itself from the debt hanging over it without some outside assistance of some kind. It is the duty of the State to buy that ground and hold it as a place for the people of Indiana to hold their State Fairs. There are some people who can not get out of their minds the idea that this State Board of Agriculture is an individual affair, and that whatever may be the measure of our success, is, in some measure, a pecuniary benefit to us. We are working here for the good of the

whole State, and I have always advocated the doctrine that the State Board of Agriculture should be one of the bureaus of the State government. We can not overestimate the work that has been done by the State Board of Agriculture. Let every delegate here who is in favor of maintaining the State Board of Agriculture go to the representative from his section and urge upon him the necessity of action in this matter.

Mr. Quick reported from Committee on Fair Grounds as follows, which was accepted :

Your Committee on Fair Grounds beg leave to report that it finds the loose property of the Board carefully housed and protected from loss or damage. The roof on the central portion of the main building needs repairs, and also the roof on the tower, at the southeast corner should be repaired, in order to protect the building and articles on exhibition. We would also recommend the repairing of the horse, cattle, sheep and hog stalls, by renting lumber as done heretofore, and re-roofing the same during the Fair.

Also, recommend the fencing of all those grounds in front belonging to the Board.

Respectfully submitted,

S. R. QUICK,
JOHN P. BARNES,
L. B. CUSTER,
JOHN LOCKRIDGE,
ALBERT O. LOCKRIDGE,
Committee.

Report of the Committee on Credentials, which was accepted :

Mr. President, State and Delegate Board:

We, having examined the list of the delegates with the Secretary, beg leave to report that we find them correct, there having been no contested cases brought before us.

S. R. QUICK,
D. F. WILLEY,
JOS. GILBERT,
Committee.

Report of the Committee on Co-operation :

MR. PRESIDENT: Your Committee to whom was referred the suggestions as to forming an association, for the mutual co-operation of the Boards of Agriculture of the different States in the west, would respectfully report.

That such an organization is advisable, and recommend that the officers of this Board be authorized to represent the Indiana Board of Agriculture in the perfection of such an organization.

ALEX. HERON,

JACOB MUTZ,

JOHN McDONALD,

Committee.

Chairman Lockhart, from the committee to consider the suggestions from the Woman's Department, reported as follows :

To the President and Members of the Delegate Board:

Your committee, to whom was referred the report of the Woman's Industrial Association, has had the same under consideration, and beg leave to make the following recommendations for your consideration :

We recognize the work of the Woman's Association as a great auxiliary to the work of the State Board of Agriculture in making our annual State Fair attractive. We believe them to be fully competent to manage their department.

We would therefore recommend that the sum of twelve hundred dollars be appropriated by the State Board, for the purpose of paying premiums and expenses of the Woman's Department, and that they be allowed to disburse all money used in their department, except the payment of premiums.

We further recommend that the said association be allowed full control of the space allotted to them, including the right to sell space for the sale of refreshments, and for the sale of goods on display in their department.

Respectfully submitted.

R. M. LOCKHART,

D. F. WILLEY,

N. R. ELLIOTT,

JOS. GILBERT,

Committee.

It was moved that the report of the Committee on the "Woman's Industrial Association" be referred to the Board proper for its action.

Mr. Lockhart. I consider that justice to the ladies who are aiding us in this work demands at our hands some action. The report from the ladies was very full; last year the State Board appropriated one thousand dollars for their use, which they managed very advantageously. They ask that two hundred dollars additional be appropriated for repairs, etc. I think it would be very discourteous to pass that by without any action. What the ladies object to is, that they do this work and wait upon us for their money. We ought to put this in shape so that they can manage their funds in their own way.

Mr. Johnson, of Marion. I understand that the report is simply one asking the opinion of this Delegate Board as to the appropriation of this money; that this Delegate Board has no power to appropriate money or anything that belongs solely and entirely to the State Board proper. That being the case, this is only a recommendation or request that the State Board shall make this appropriation of twelve hundred dollars for the ladies' department.

Dr. Brown. I move to amend the pending motion, by moving that the report be referred to the State Board proper, with the *advice* that its recommendations be carried out.

Motion as amended adopted.

By request, the business programme was suspended.

On motion of Mr. Johnson, Prof. Moss, President of the State University at Bloomington, being present, was invited to the stand to deliver an address on "Educated Industry" arranged for the afternoon.*

Mr. Elliott offered the following resolution, which was adopted:

* Prof. Moss's address was delivered orally, but will be found elsewhere in this report, under the head of essay matter.

Resolved, That the thanks of the Delegate and State Board of Agriculture be tendered Prof. Moss for his able and instructive lecture on "Educated Industry."

Dr. Brown followed, with a few remarks on the same subject.

The President read a communication from the Illinois Dairymen's Association, in convention at Elgin, Illinois, as follows:

ELGIN, ILLINOIS, JANUARY 3, 1881.

To the President of the Delegate State Board of Indiana:

DEAR SIR:—In the *Country Gentleman* of the 30th ult., I notice that you are to have a meeting at Indianapolis to-morrow, and although no programme of your proceedings is published with the notice, I presume your meeting is for the consideration of the interests of the agricultural industry.

Will you allow me to call your attention to the injury that is being done to those interests by the counterfeiting of the products of the soil, in the adulteration of human food.

I do not desire to elaborate this, as I presume the delegates to your convention are already sufficiently familiar with the subject to take intelligent action in regard to it.

What I desire to do is to call your attention to the action of the "Illinois State Dairymen's Association" at their annual meeting, and that of the Elgin Board of Trade, as will appear from the inclosed resolutions.

I also inclose a copy of resolutions that will be presented to-day to the "Board of Supervisors" of Kane county, Illinois, which will, doubtless, be adopted.

"The Fox River Valley Medical Association," which meets to-day, will also take action on the subject of adulteration of food and drugs designed for human use, claiming, as some of the ablest of them do, that the use of adulterated food and drugs is that one great cause of the "insanity" and other nervous diseases now so alarmingly on the increase in all our communities.

The object of the effort now being put forth is to secure the co-operation of all industries, the producers and consumers, and all representative bodies, in order to suppress this evil of food adulteration.

Will you have this matter brought before your convention, and take such action as in your judgment will best secure the accomplishment of this object.

Very respectfully your obedient servant, G. P. LORD,

Chairman of Legislative Com. of Ill. State Dairymen's Association.

Copy of resolutions that will be adopted by the Board of Supervisors of Kane County, Illinois:

WHEREAS, The adulteration of human food is a counterfeiting of the products of the soil, and therefore injures the agriculturist; and,

WHEREAS, The adulteration of food, instead of adding to, detracts from, the intrinsic and nutritive value of all such food preparation, and therefore defrauds the consumer; and,

WHEREAS, The introduction into the human stomach of large quantities of innutritious and indigestible ingredients is well calculated to derange the digestive organs and undermine the whole physical system, thus rendering those using such preparations proper subjects for medical treatment; and,

WHEREAS, It is asserted by those engaged in the practice of medicine that the drugs are frequently so adulterated that instead of proving beneficial they are liable to be injurious to the nervous system of those to whom they are administered; and,

WHEREAS, The use of adulterated food and adulterated drugs is stated by medical men who have given attention to the matter to be one cause of the insanity and many nervous diseases now so alarmingly on the increase in all our communities; therefore,

Resolved, By the Board of Supervisors of Kane County, Illinois, that the manufacture and sale of adulterated food and drugs, designed for human use, is not only a fraud, but a crime that should be suppressed by legal enactment.

Resolved, That the interest of the tax-payers—who are called upon to support the pauperism and charitable institutions of the country—demand that the evils resulting from the adulteration of food and drugs, designed for human use, should be suppressed; and, therefore,

Resolved, That it is the duty of our Legislators to enact such laws as will effectually protect the people against the frauds practiced, as also against the physical evils resulting from the sale and use of adulterated food and drugs designed for human use.

Resolved, That a copy of these resolutions be forwarded to the President of the United States; to the Senators from this State, and the member of Congress from this District, also to the Governor of this State, to the Senator and each one of the members of the Legislature from this District, and to the Chairman of the Board of Supervisors of each county in this State, with the request that they co-operate with us in our efforts to suppress this evil.

GENEVA, ILL., January 3, 1881.

Mr. Woods. I think this a very important subject and it calls for action from this State and Delegate Board. I consider it of so much importance, that I move that this communication, with the accompanying resolutions, be referred to a committee of three that shall report to this body this afternoon.

Which motion was carried.

Committee appointed by chair consisted of Messrs. Turner, Woods, McDonald and Hargrove.

Upon motion, recess was taken until 1:30 P. M.

AFTERNOON SESSION.

HALF-PAST ONE O'CLOCK.

The Convention met, President Ragan in the chair.

First in order, according to programme, was the election of members of the Board to fill vacancies of the retiring members.

Motion of Mr. Seward carried, that the chair appoint two tellers to count the vote. Messrs. Seward and Davidson, of Gibson, were so appointed.

Motion of Mr. Lockhart carried, that D. B. Canady, of Rush, be permitted to cast vote for Cambridge City District Society.

Motion of Mr. Seward carried, that Mr. Alderson, of Plainfield, be permitted to cast the vote for the Plainfield Agricultural and Horticultural Society.

Motion of Mr. Johnson, of Marion, carried, that Mr. Heintz, of Terre Haute, be permitted to cast vote for the Terre Haute Horticultural Society.

The following were elected members:

Fifth District—Mr. T. W. W. Sunman, of Ripley.

Sixth District—Mr. S. R. Quick, of Bartholomew.

Eighth District—Mr. Joseph Gilbert, of Vigo.

Ninth District—Mr. W. H. Ragan, of Hendricks.

Tenth District—Mr. H. C. Meredith, of Wayne.

Eleventh District—Mr. J. P. Barns, of Madison.

Twelfth District—Mr. J. K. O'Neal, of Tippecanoe.

Thirteenth District—Capt. T. M. Kirkpatrick, of Howard.

Mr. Mitchell, of Gibson, delivered an address entitled "Is it important to have experts as Committees to pass on Live Stock at our Fairs?" which was well received, and is published elsewhere in this report.

Motion of Mr. Mutz carried, that the subject be referred to the Board proper, to be considered at their next meeting.

The special order of the morning was then taken up, referring to sale of the fair ground property to the State, and some lengthy and interesting discussion followed by Messrs. Mutz, F. A. W. Davis, Murdock, Hendry, Woods, Crim, Wildman and Ratliff.

Mr. Mutz. I am astonished that an enlightened people, people who have followed the profession of farming so long, should be backward about expressing themselves in regard to the duty of the Legislature upon this great question, when we consider that Indiana is, strictly speaking, an agricultural State. She is second to no State in the Union as an agricultural State, and yet the Legislature of the great State of Indiana stands back and doubts as to whether they should take care of their own property. The State Fair grounds are as much the property of the State of Indiana as the grounds upon which you are building the State House. Let us take hold of this matter and urge it upon the Legislature. I do not believe the people of Indiana are going to give away this property.

Mr. F. A. W. Davis. I do not believe that I can enter into any discussion in regard to your resolutions. They seem to be to the point. I believe that the purpose for which they are set forth can be easily accomplished. I came this afternoon to talk in a business way about this matter, first as trustee, for the State, of the second mortgage. It will be my duty at this session of the Legislature to report the condition of this Board in regard to the mortgages. I shall set forth the facts that there are sixty thousand dollars of these bonds due, and it is in my mind to say that it is necessary for the State to take some immediate action to

protect the trust that I have and I believe they will do it. I believe it will be the duty of the Legislature to take up these bonds. Some time ago I could have negotiated part of the bonds at eighty cents on the dollar, but times have changed and such securities are held higher than at that time. I have had, in the last few days, telegrams from Baltimore, urging me to see what could be done, and wanting to know if it was going to be paid. I believe the State ought to take up these bonds and let you have the money at four per cent. I may say that I have been the banker for the Association for seventeen years, and I believe that you are able to pay four per cent. If the State, at any time, wants to recover the money it can do so out of this property. I regard the property as very valuable and steadily increasing in value. I thought I would call the attention of the Legislature to the fact that the twenty-five thousand dollars was in imminent danger of being swept away. I think the Legislature ought to authorize me to permit you to issue a new bond and get the money at six per cent., if you have to carry it—that is, if you desire to retain the property.

Mr. Mutz, to *Mr. Davis*. Have you had any conversation with the attorneys in regard to the State taking it up and letting them have it at four per cent?

Mr. Davis. I have not consulted any of the attorneys, but it seems to me that the State could take from their treasury and advance to you upon these bonds and hold them for you. There is another matter that I would like to call the attention of the Board to. There are outstanding some obligations of this Board as guarantee bonds that could have been adjusted a long time ago at less than their value, and should be attended to at your earliest opportunity.

Mr. Murdock. I am glad to hear this matter brought up, but the idea of our going to the members of the Legislature and asking or begging that they should discharge this debt, or take charge of it in some way, so as to relieve

this Board from this indebtedness, seems to me to be perfectly ridiculous. I say it is ridiculous for the great State of Indiana to stand with a little debt of sixty thousand dollars hanging over an institution of this kind. It becomes our duty, as members or visitors to this Board, upon our return home, to immediately bring this matter to the attention of the citizens of the different counties, and then let us come to the Legislature and not ask but demand that this debt be discharged. It seems to me ridiculous that the great agricultural interest should go begging the servants that are sent to look after our interests. I would suggest, in connection with the resolution that has been offered, that there not only be a committee appointed, but that each member from each county representing the visiting Board bring the matter before their fellow-citizens, and let the demand come up from every county to the members elect that they shall demand that this matter be settled at once.

Mr. Hendry. Some two years ago a question similar to this one was discussed. The question is whether the State shall make an appropriation to pay off this indebtedness or not. I think that the State is under as much obligation to relieve the State Board of Agriculture from losing its property as it is to other institutions. The State Board of Agriculture is a State institution. In the year 1855, or thereabouts, the State University at Bloomington, under a decision of the courts, had been deprived of a large amount of land that had been granted to the institution and upon application of the Board having charge of the University at Bloomington, the State issued its bonds bearing, probably, six per cent interest and covered the entire loss to the University. It was predicated upon this fact, that the usefulness of that University must not be destroyed. Now, if it be true in this case that this institution is a State institution, I apprehend that the plain duty of the Legislature is this, not only to provide for the payment of the interest, ut to provide for the payment of this debt.

Mr. Wood. According to my understanding the State Board of Agriculture is a State institution, and it seems to me that it must come under the protection of the State. As I understand it, the law governs and runs this Board of Agriculture. Supposing that the State should let this land be sold, what would be our position before the world? That the great State of Indiana can not retain thirty-nine acres for a public common to hold her State fair. The people of the old world demanded a piece of ground as a public common, free forever, and that practice followed the emigrants to this new world. Looking at the question in the light of an educational institution, the State Agricultural Society is as much an educator as the State University, I hold.

There is another view of it. I consider that the State is under the most solemn obligation to take care of her own. It would be a burning disgrace to the State to have it said that Baltimore had foreclosed on Indiana and taken her thirty-nine acres.

The labor of the State of Indiana makes its wealth, and the idea that we can not ask Indiana to own as a public park or common, forever dedicated to labor, and the industry of the State, is simply ridiculous.

Mr. Crim. The bonds have matured and we have got to do something to satisfy those bondsmen. The time has arrived for action. The question before the board is what is the best plan to pursue? My opinion is that we should go before the Legislature and convince them that this is a State institution and that they must protect the State's property. It is really a matter of dollars and cents with our Legislature. Can they afford to lose the thirty thousand dollars that they have already appropriated by not paying the sixty thousand dollars? If the junior mortgagor does not buy it in and protect it, it is a dead loss to the State of Indiana. It is not only to protect that interest, but they owe a debt to the great agricultural interest of the State. I think now is the time to act by appointing a

competent committee to go to the Legislature. It is for the interest of the State to protect this property. It is a plain business transaction to me.

The resolution of Mr. Ratcliff was re-read, put upon its passage and carried unanimously.

Mr. Seward read the following resolution, which was adopted:

Resolved, That each delegate to the annual meeting of the State Board of Agriculture is hereby requested, personally or by letter, to urge upon the legislators from their respective counties, the necessity of prompt action on their part in assisting the State Board of Agriculture from the burden of debt now hanging over them, so that the grounds now held and used by the Board for fair purposes, may not be lost by reason of the foreclosure of the mortgage bonds now due.

The committee report, on the communication from Elgin, Illinois, was read and accepted, as follows:

To the State and Delegate Board of Agriculture:

We, the committee to whom the papers and resolutions of the Illinois State Dairymen's Association, on the adulteration of food, was referred, beg leave to recommend the adoption of the same by this Board, with the proper alterations of the dates, etc., and that a committee of three, consisting of the President, Secretary and Treasurer, be appointed, to present the matter before the Legislature during the coming session, for their consideration and adoption.

JOHN N. TURNER,
BARTLETT WOODS,
SAMUEL HARGROVE,

Committee.

Adjourned till 7:30 P. M.

EVENING SESSION.

HALF-PAST SEVEN O'CLOCK.

The Board met at the appointed time.

President Ragan announced the serious illness of Mr. Sutherland, a member of the Board.

President E. E. White, of Purdue University, was then introduced, and delivered an address on "Technical Training in American Schools."

A vote of thanks was tendered President White for his able address, and the same requested for publication.

Dr. George L. Curtiss was introduced, and delivered an address on "Ponds and Pond Water," with reference to health and wealth.

Upon motion, a vote of thanks was tendered Dr. Curtiss for his very interesting and entertaining address, and the same requested for publication.*

Mr. Farley, Secretary of the Tri-State Fair, of Toledo, Ohio, was introduced and made a short address, explaining some of the advantages of organizing a fair circuit, as follows:

"Last summer there was a conflict in the time of holding some of our large fairs. I said to some of the members of our Board that it would be a good thing to have what we might call a fair congress to arrange a circuit fair for 1881, and they coincided with me. I went to Cleveland and talked with members of the Northern Ohio Fair, and to the Ohio State Fair and talked with the members there, and they all thought it would be a good thing, and corresponded with members of the Michigan State Board, and we agreed to have a meeting of the representatives of the different fairs at Toledo, on the 28th of December. All of those organizations reported, sending delegates to the meeting. In order that there should be no conflict in the holding of the fairs, it was decided, if possible, that we should commence with the Ohio State Fair for 1881, commencing on the 28th of August for the beginning of the circuit, the Northern Ohio on the 5th day of September, the Tri-State Fair at Toledo on the 12th of September, and the Michigan State Fair on the 19th day of September. In

* Will be found elsewhere under head of Essay Matter.

talking over this matter we thought if the Indiana State Fair would join in this circuit, we would like very much to have it. We find that the Indiana State Fair would follow directly after the close of our circuit. If a circuit of that kind was formed, we might help each other in the matter of advertising and the procuring of cheaper transportation, and it would be well for the large exhibitor who goes from one fair to another."

Mr. Lockhart made a few remarks on the same subject.

Upon motion, the Delegate Board adjourned *sine die*.

INDIANA STATE FAIR.

PREMIUM AWARDS, 1880.

HORSES.

H. C. MEREDITH, Superintendent.

CLASS I.—Thoroughbreds.

[Where State is not given in address, Indiana is implied]

Stallion, 4 years old and over, James Blanchfill, Oxford, Ben-	
ton county,	\$35
Second premium, David Kilgore, Yorktown, Delaware Co.,	17
Stallion, 3 years old and under 4, Joseph Lewark, Indianapolis,	
Marion county,	25
Brood mare, James Maloy, Rensselaer, Jasper county, . . .	20
Second premium, M. L. Hare, Indianapolis,	10

COMMITTEE—J. Rodegap, Washington C. H., Ohio; J. F. Keller, Cynthiana, Ky.; C. B. Jackson, Centerville, Ind.

CLASS II.—General Purpose.

Stallion, 4 years old and over, Riddell & Norris, Hebron, Boone	
county, Kentucky,	\$35
Second premium, Polly & Barnhart, Thorntown, Boone co.	17

Stallion, 3 years old and under 4, Cheever Hill, Thorntown, Boone county,	\$28
Second premium, John Marvel, Royalton,	14
Stallion, 2 years old and under 3, W. S. Hadley, Clermont, Ma- rion county,	14
Second premium, D. L. Thomas, Rushville, Rush county, . .	7
Stallion, 1 year old and under 2, E. F. Claypool, Indianapolis, .	7
Second premium, J. F. Miller, Richmond,	3
Stallion, sucking colt, A. M. Huff, Oakland, Marion county, . .	6
Second premium, D. L. Thomas, Rushville, Rush county, . .	3
Mare, 4 years old and over (colt by her side), A. M. Huff, Oak- land, Marion county,	20
Second premium, G. M. Spencer, Portland Mills,	10
Mare, 3 years old and under 4, W. T. Scott, Portland Mills, . .	14
Second premium, E. F. Claypool, Indianapolis,	7
Mare, 2 years old and under 3, William Meikle, Pendleton, . .	7
Second premium, Riddell & Norris, Hebron, Boone co., Ky., .	3
Mare, 1 year old and under 2, C. T. Allen, Glenn Valley	7
Second premium, F. Sharpe, Indianapolis,	3
Sucking filly, G. M. Spencer, Portland Mills,	6
Second premium, A. M. Huff, Oakland, Marion county, . . .	3
Mare, 4 years old and over, regardless of having been bred, Mann Bros., Southport, Marion county,	17
Second premium, Allen Jackson, Plainfield,	7
Gelding, 4 years old and over, J. I. Keeney, Danville,	17
Second premium, Ira C. Williams, Lewisville, Henry Co. . .	7
Gelding, 3 years old and under 4, Leland Tansell, Zionsville, Boone county,	14
Second premium, C. F. Mapes, Indianapolis,	7
Gelding, 2 years old and under 3, Mann Bros., Southport, Marion county,	7
Matches, geldings or mares, George D. Emery, Indianapolis, . .	20
Second premium, J. P. Beck, Thorntown,	10

COMMITTEE—C. B. Jackson, Centerville; John T. An-
derson, Lafayette; G. W. Kenran, Terre Haute.

CLASS III.—Light Harness.

Stallion, 4 years old and over, J. P. Fairley, Rushville, Rush county,	\$30
Second premium, J. W. Wren, German & Co., Florence, Boone county, Ky,	15

Stallion, 3 years old and under 4, John S. Fleming, Indianapolis, Marion county,	\$25
Second premium, Riddell & Norris, Hebron, Boone county, Kentucky,	12
Stallion, 2 years old and under 3, Mann Bros., Southport, Marion county,	14
Second premium, Charley Schmidt, Indianapolis,	7
Mare, 4 years old and over (colt by her side), M. L. Hare, Indianapolis,	14
Second premium, D. L. Thomas, Rushville, Rush county,	7
Mare, 3 years old and under 4, E. F. Claypool, Indianapolis,	14
Second premium, A. A. Russell, Indianapolis,	7
Mare, 2 years old and under 3, R. T. German, Florence,	7
Second premium, J. C. Rowley, Columbus,	8
Mare, 4 years old and over, regardless of having been bred, Ira C. Williams, Lewisville,	17
Second premium, E. F. Claypool, Indianapolis,	7
Gelding, 4 years old and over, S. Armstrong, Rushville, Rush county,	14
Second premium, E. F. Claypool, Indianapolis,	7
Gelding, 2 years old and under 3, D. L. Thomas, Rushville, Rush county,	7

COMMITTEE—J. Rodegap, Washington C. H., Ohio;
Nelson Johnson, Washington, Indiana; Geo. W. Kenran,
Terre Haute, Indiana.

CLASS IV.—Heavy Draft.

Stallion, 4 years old and over, Cal. Bates, Falmouth, Fayette county,	\$35.
Second premium, Wm. Meikle, Pendleton,	17
Stallion, 3 years old and under 4, Wm. Meikle, Pendleton,	28
Second premium, Mann Bros., Southport, Marion county,	14
Stallion, 2 years old and under 3, Wm. Meikle, Pendleton,	14
Second premium, Cal. Bates, Falmouth, Fayette county,	7
Stallion, 1 year old and under 2, Cal. Bates, Falmouth, Fayette county,	7
Second premium, Robert Bogue, Fairmont, Grant county,	8
Stallion, sucking colt, Robert Bogue, Fairmont, Grant county,	6
Mare, 4 years old and over (colt by her side), Robert Bogue, Fairmont, Grant county,	20.

Mare, 3 years old and under 4, Cal. Bates, Falmouth, Fayette county,	\$14
Second premium, Robert Bogue, Fairmont, Grant county, .	7
Mare, 2 years old and under 3, Wm. Meikle, Pendleton, . .	7
Second premium, Cal. Bates, Falmouth, Fayette county, .	3
Mare, 4 years old and over, regardless of having been bred, Cal. Bates, Falmouth, Fayette county,	17
Second premium, Robert Bogue, Fairmont, Grant county, .	7
Gelding, 4 years old and over, John Bates, Indianapolis, . .	17
Second premium, Leland Tansell, Zionsville, Boone Co., .	7
Heavy draft team, Wm. Meikle, Pendleton,	15

COMMITTEE—John W. Wilson, Shelbyville, Ind.; C. S. Arthur, Portland, Ind.; Nelson Johnson, Washington, Ind.

CLASS V.—Trotting, Pacing and Running Races.

TUESDAY, SEPTEMBER 28, 1880.

RUNNERS—4 years old and over.

James Maloy, Rensselaer, "Classmate,"	\$75
Second premium, B. Kelley, Champaign, Illinois, "Champaign Billet,"	50
Third premium, James Blanchfill, Oxford and Benton county, "Gloster,"	25

STALLION TROT.

M. F. McCaffey, Stilesville, Hendricks county, "Cady," . .	75
Second premium, Rue & Cecil, Danville, Ky., "Hampton," .	50
Third premium, W. Beymer, Indianapolis, "W. B.," . . .	25
Money to be divided equally.	

COMMITTEE—O. P. Chaney, C. B. Jackson, L. D. Woodmansee.

WEDNESDAY, SEPTEMBER 29.

RUNNERS—Under 4 years of age.

Joe Lewark, Indianapolis, "Recorder,"	\$100
Second premium, G. L. Gilkey, Waldron, "Trumpington," .	60
Third premium, David Kilgore, Yorktown, "Col. Hunt," .	40

COMMITTEE—John Rodegap, E. Combs, C. B. Jackson.

GREEN PACE.

Tom Levi, Noblesville, "Bay Tom,"	\$25
Second premium, J. Newbro, Evansville, "Flora,"	15
Third premium, John Maloney, Indianapolis, "John R." .	10
COMMITTEE—John Rodegap, E. Combs, C. B. Jackson.	

THURSDAY, SEPTEMBER 30, 1880.

TROTTERS—That have never beaten 2:40.

W. H. Wishard, Indianapolis, "Polly Wishard,"	\$150
Second premium, M. F. McCaffey, Stilesville, "Snooks," .	100
Third premium, Thomas Dickson, Greensburg, "Big John,"	50

TROTTERS—Under 5 years of age.

S. Armstrong, Rushville, "Little John,"	\$50
Second premium, Charles Evans, Rushville, "Nancy M." .	30
Third premium, U. J. Fox, Anderson, "Lady Fox," . . .	20
COMMITTEE—John Rodegap, R. Watt, C. B. Jackson.	

FRIDAY, OCTOBER 1, 1880.

PACERS.—Entries confined to horses owned in this State.

Benjamin Davis, Indianapolis, "Hoosier Sam,"	\$75
Second premium, James Newbro, Evansville, "Winder,"	
S. G.,	50
Third premium, Lum Navc, Attica, "Little Ed,"	25

RUNNERS—Consolation Purse.

James Blanchfill, Oxford, Benton county, "Gloster," . . .	\$75
Second premium, B. Kelley, Champaign, Illinois, "Cham-	
paign Billet,"	50
Third premium, Greenville Wilson, Waldron, "Montigue,"	25
COMMITTEE—John Rodegap, A. W. Powell, New Cas-	
tle, C. B. Jackson.	

FREE FOR ALL TROT.

SATURDAY, OCTOBER 2, 1880.

John Lackey, Cambridge City, "Kitty Bates,"	\$250
Second premium, Backen & Wyatt, Greensburg, "Big	
John,"	150
Third premium, Wm. Boyce, Indianapolis, "Jerome," . .	100
COMMITTEE—Allen Jackson ; A. W. Powell, New Castle.	

RUNNERS, FREE FOR ALL—Half mile and repeat.

James Maloy, Rensselaer, "Classmate,"	\$50
Second premium, A. Neff, Jamestown, "Black Crow,"	30
Third premium, J. A. Johnson, Washington C. H., Ohio, "Molly Brock,"	20

COMMITTEE—Allen Jackson; A. W. Powell, New Castle.

CLASS VI.—Saddle Horses.

Saddle horses, gelding or mare, any age, H. McCoy, Indianapolis,	\$15
Second premium, Rue & Cecil, Danville, Ky.,	8

COMMITTEE—John Rodegap, Washington C. H., Ohio; George W. Krenson, Terre Haute, Indiana; Nelson Johnson, Washington, Indiana.

CLASS VII.—Sweepstakes on Horses.

Heavy draft stallion, Wm. Meikle, Pendleton,	\$35
Heavy draft mare, Cal. Bates, Falmouth, Fayette county,	20
Stallion of any age or class, except heavy draft, J. W. Wren, German & Co., Florence, Boone county, Ky.,	45
Mare, any age or class except heavy draft, J. C. Rowley, Columbus,	30
Stallion, showing 3 best colts under 1 year old, A. M. Huff, Oakland,	40
Herd of six, consisting of 1 stallion and 5 mares, except heavy draft, owned by exhibitor, M. L. Hare, Indianapolis,	40
Herd of six, heavy draft, consisting of 1 stallion and 5 mares, owned by one exhibitor, Cal. Bates, Falmouth, Fayette county,	40

COMMITTEE—G. W. King, Edinburg; Samuel Dinsmore, Bloomington; A. W. Powell, New Castle.

CLASS VIII.—Jacks Jennets and Mules.

Jack, 3 years old and over, James D. Smith, Fennis, Shelby co.,	\$20
Second premium, C. W. Neal, Brownsburg,	10

PREMIUM AWARDS.

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Jack, 2 years old and under 3, J. G. Sweeney, Greencastle, . .	\$15
Jack, 1 year old and under 2, C. W. Neal, Brownsburg, . . .	10
Second premium, G. W. Lancaster, Indianapolis, . . .	5
Jennet, 3 years old and over, J. G. Sweeney, Greencastle, . .	10
Second premium, G. W. Lancaster, Indianapolis, . . .	8
Mule, 3 years old and under 4, Leland Tansell, Zionsville, Boone county,	12
Second premium, J. G. Sweeney, Greencastle,	6
Mule, 1 year old and under 2, Leland Tansell, Zionsville, . . .	8
Second premium, Leland Tansell, Zionsville,	5
Mule colt, John J. Hessong, Indianapolis,	7
Second premium, D. D. Boyd, McCordsville, Hancock co.,	8
Pair mules, 3 years old and over, Wm. H. Cox, Bridgeport, . .	20

COMMITTEE—John W. Wilson, Shelbyville, Indiana; John P. Anderson, Lafayette; Will. T. Anderson, Clay county.

CLASS IX.—Sweepstakes on Jacks and Jennets.

Jack, any age, J. G. Sweeney, Greencastle,	\$20
Jennet, any age, J. G. Sweeney, Greencastle,	10
Jack, showing 8 best colts under 1 year, D. D. Boyd, McCordsville, Hancock county,	20

COMMITTEE—W. W. Yeats, Bainbridge; Nelson Johnson, Washington; Will T. Anderson, Brazil.

CATTLE.

ROBT. MITCHELL, Superintendent.

CLASS X—Short Horns.

Bull, 4 years old and over, David Selsor, London, Madison county, Ohio,	\$50
Second premium, J. Baugh & Son, Farmer's Institute, Ind.,	25
Bull, 3 years old and under 4, Green Wilson, Waldron, Shelby county,	40
Bull, 2 years old and under 3, Thomas Wilhoit, Middletown, Henry county,	20
Second premium, E. Clore, Alamo, Montgomery county,	15

Bull, 1 year old and under 2, Thomas Wilhoit, Middletown, Henry county,	\$15
Second premium, Sam Pursel, N. ra, Marion county,	8
Bull calf, E. Clore, Alamo, Montgomery county,	10
Second premium, Thomas Wilhoit, Middletown,	5
Cow, 4 years old and over, J. Baugh & Son, Farmer's Institute,	30
Second premium, Thomas Wilhoit, Middletown,	15
Cow, 3 years old and under 4, David Selsor, London, Madison county, Ohio,	20
Cow, 2 years old and under 3, Thomas Wilhoit, Middletown,	15
Second premium, J. Baugh & Son, Farmer's Institute,	8
Heifer, 1 year old and under 2, Thomas Wilhoit, Middletown,	15
Second premium, J. Baugh & Son, Farmer's Institute,	8
Heifer calf, J. Baugh & Son, Farmer's Institute,	10
Second premium, J. Baugh & Son, Farmer's Institute,	5
Breeding cow with calf at foot, E. Clore, Alamo, Montgomery county,	30
Second premium, David Selsor, London, Madison county, Ohio,	15

COMMITTEE—James W. Kay, Fredricksburg, Ind.; Warren Mason, Wabash, Ind; Joseph Cole, Poseyville, Ind.

CLASS XI.—Jerseys and Other Breeds.

Jersey bull, 3 years old and over, J. W. Myser, Butlerville, Jennings county,	\$20
Second premium, W. A. Ketcham, Indianapolis,	12
Jersey bull, 2 years old and under 3, W. J. Hasselman, Indianapolis,	15
Second premium, A. Garretson & Bros., Pendleton, Madison county,	8
Jersey bull, 1 year old and under 2, "Beech Grove Farm," Ingallston, Marion county,	10
Jersey cow, 3 years old and over, W. J. Hasselman, Indianapolis,	15
Second premium, A. Garretson & Bros., Pendleton,	10
Jersey cow, 2 years old and under 3, A. Garretson & Bros., Pendleton,	10
Second premium, A. Garretson & Bros., Pendleton,	5
Jersey heifer, 1 year old and under 2, A. Garretson & Bros., Pendleton,	8
Second premium, W. A. Ketcham, Indianapolis,	4

Jersey heifer calf, "Beech Grove Farm," Ingallston, Marion county,	\$6
Second premium, W. A. Ketcham, Indianapolis,	3
Jersey breeding cow with calf at foot, "Beech Grove Farm," Ingallston, Marion county,	15
Herd of Jersey cattle, consisting of 1 bull and 5 cows, "Beech Grove Farm,"	Diploma
Devon bull, W. A. Macy, Lewisville, Henry county,	15
Devon cow, G. W. Lancaster, Indianapolis,	10
Ayrshire cow, Mrs. A. Wallace, Indianapolis,	10
Polled Angus bull, J. Baugh & Lutes, Farmer's Institute,	15
Polled Angus cow, J. Baugh & Lutes, Farmer's Institute,	10

COMMITTEE—James W. Kay, Fredricksburg; Warren Mason, Wabash; Joseph Cole, Poseyville, Posey county.

SPECIAL PREMIUMS ORDERED BY BOARD.

CLASS XII.—Oxen and Steers.

Steer, 3 years old and over, J. P. Forsythe, Franklin, Johnson county,	\$10
Steer, 2 years old and under 3, J. Baugh & Son, Farmers' Institute,	10

FAT CATTLE, SHEEP AND HOGS.

Fatted steer, J. P. Forsythe, Franklin, Johnson county	10
Fatted cow, J. Baugh & Son, Farmers' Institute,	10
Fatted sheep, T. B. Bennington, Laporte, Lorain county, Ohio,	5

COMMITTEE—James W. Kay, Fredricksburg, Ind.; Warren Mason, Wabash, Ind.; Joseph Cole, Poseyville, Ind.

CLASS XIII.—Sweepstakes on Cattle.

Bull, any age or breed, David Selsor, London, Madison county, Ohio,	50
Cow, any age or breed, E. Clore, Alamo, Montgomery county,	50

HERDS.

Bull, with 3 of his calves not over 12 months old, J. Baugh & Son, Farmers' Institute,	50
Herd of 5 head, consisting of 1 bull and 4 cows or heifers 2 years old and over, E. Clore, Alamo, Montgomery county,	100

Herd under 2 years old, consisting of 1 bull and 4 heifers, owned by exhibitor sixty days previous to exhibition, Thomas Wilhoit, Middletown, Henry county, Ind., . . .	\$50
Herd, 1 bull and 4 cows or heifers, any age or breed, owned and bred by exhibitor in Indiana, Thomas Wilhoit, Middle- town,	75

COMMITTEE—R. C. McWilliams, Marshall; G. W. King, Edinburg; O. Siple, Petersburg.

S H E E P.

S. R. QUICK, Superintendent.

CLASS XIV.—Fine Wool Sheep, to include American, Spanish and French Merinos.

Buck, 2 years old and over, Cook, Morse & Co., Raymonds, Union county, Ohio,	\$12
Second premium, Thomas Wilhoit, Middletown,	6
Buck, 1 year old and under 2, Thomas Wilhoit, Middletown,	8
Second premium, Cook, Morse & Co., Raymonds, Union county, Ohio,	4
Buck lamb, Cook, Morse & Co., Raymonds, Union county, Ohio,	6
Second premium, Thomas Wilhoit, Middletown,	3
Ewe, 2 years old and over, Cook, Morse & Co., Raymonds, Union county, Ohio,	10
Second premium, Cook, Morse & Co., Raymonds, Union county, Ohio,	5
Ewe, 1 year old and under 2, Cook, Morse & Co., Raymonds, Union county, Ohio,	6
Second premium, Cook, Morse & Co., Raymonds, Union county, Ohio,	3
Ewe lamb, Cook, Morse & Co., Raymonds, Union county, Ohio,	4
Second premium, Thomas Wilhoit, Middletown,	2
Five lambs, Cook, Morse & Co., Raymonds, Union county, Ohio,	8

COMMITTEE—Hiram Barricklow, Aurora, Indiana; J. M. Cartmell, Logansport, Indiana; E. H. Evans, Raglesville, Indiana.

CLASS XV.—Leicester or Lincoln.

Buck, 2 years old and over, W. L. Scott, Scott Station, Shelby county, Kentucky,	\$12
Ewe, 2 years old and over, Uriah Privett, Greensburg, Decatur county,	10
Second premium, Uriah Privett, Greensburg, Decatur co.	5

COMMITTEE—Hiram Barrieklow, Aurora; J. M. Cartmell, Logansport; E. H. Evans, Raglesville.

CLASS XVI.—Long Wool Sheep—Cotswolds.

Buck, 2 years old and over, T. W. Samuels & Sons, Deatsville, Kentucky,	\$12
Second premium, S. W. Dungan, Franklin, Johnson county, Indiana,	6
Buck, 1 year old and under 2, T. W. Samuels & Sons, Deatsville, Kentucky,	8
Second premium, T. W. Samuels & Sons, Deatsville, Ky.,	4
Buck lamb, T. W. Samuels & Sons, Deatsville, Kentucky,	6
Second premium, T. W. Samuels & Sons, Deatsville, Ky.,	3
Ewe, 2 years old and over, Cal. Darnell, Indianapolis,	10
Second premium, S. W. Dungan, Franklin,	5
Ewe, 1 year and under 2, T. W. Samuels & Sons, Deatsville, Ky.,	6
Second premium, T. W. Samuels & Sons, Deatsville, Ky.,	3
Ewe lamb, T. W. Samuels & Sons, Deatsville, Ky.,	4
Second premium, Cal. Darnell, Indianapolis,	2
Five lambs, T. W. Samuels & Sons, Deatsville, Ky.,	8
Second premium, Cal. Darnell, Indianapolis,	4

COMMITTEE—J. M. Cartmell, Logansport, Ind.; H. Barrieklow, Aurora; J. S. Blackledge, Rushville; J. C. Boroughs, East Germantown; J. H. Hancock, Fredricksburg.

CLASS XVII.—Southdowns.

Buck, 2 years old and over, F. A. Byars, Simpsonville, Shelby county, Kentucky,	\$12
Second premium, T. B. Bennington, Laporte, Lorain county, Ohio,	6
Buck, 1 year old and under 2, F. A. Byars, Simpsonville, Ky.,	8
Second premium, T. B. Bennington, Laporte, Ohio,	4

Buck lamb, F. A. Byars, Simpsonville, Ky.,	\$6
Second premium, F. A. Byars, Simpsonville, Ky.,	3
Ewe, 2 years old and over, F. A. Byars, Simpsonville, Ky.,	10
Second premium, F. A. Byars, Simpsonville, Ky.,	5
Ewe, 1 year old and under 2, F. A. Byars, Simpsonville, Ky.,	6
Second premium, T. B. Bennington, Laporte, Ohio,	3
Ewe lamb, F. A. Byars, Simpsonville, Ky.,	4
Second premium, T. B. Bennington, Laporte, Ohio,	2
Five lambs, F. A. Byars, Simpsonville, Ky.,	8
Second premium, Uriah Privett, Greensburg,	4

COMMITTEE—Hiram Barricklow, J. M. Cartmell, E. H. Evans, J. H. Hancock, J. C. Boroughs.

CLASS XVIII.—Oxfordshire, Shropshire and Hampshire.

Buck, 2 years old and over, Geo. Allen, Palamo, Illinois,	\$12
Second premium, T. B. Bennington, Laporte, Lorain county, Ohio,	6
Buck, 1 year old and under 2, Geo. Allen, Palamo, Illinois,	8
Second premium, Geo. Allen, Palamo, Illinois,	4
Buck lamb, T. B. Bennington, Laporte, Lorain county, Ohio,	5
Second premium, T. B. Bennington, Laporte, Ohio,	2
Ewe, 2 years old and over, Geo. Allen, Palamo, Illinois,	10
Second premium, Geo. Allen, Palamo, Illinois,	5
Ewe, 1 year old and under 2, Geo. Allen, Palamo, Illinois,	6
Second premium, Geo. Allen, Palamo, Illinois,	3
Ewe lamb, T. B. Bennington, Laporte, Ohio,	4
Second premium, T. B. Bennington, Laporte, Ohio,	2
Five lambs, T. B. Bennington, Laporte, Ohio,	8
Second premium, Uriah Privett, Greensburg,	4

COMMITTEE—Hiram Barricklow, J. M. Cartmell, E. H. Evans, J. H. Hancock, J. C. Boroughs.

CLASS XIX.—Sweepstakes on Fine Wool and other Sheep. Fine Wool to include American, Spanish and French Merino.

Buck, Thomas Wilhoit, Middletown,	\$10
Buck, having five best lambs, Cook, Morse & Co., Raymonds, Union county, Ohio,	15
Ewe, any age, Cook, Morse & Co., Raymonds, Union county, O.,	10

COMMITTEE—J. C. Boroughs, J. S. Blacklidge, J. H. Hancock.

LONG WOOL.

Buck, W. L. Scott, Scott Station, Kentucky,	\$10
Buck having 5 best lambs, T. W. Samuels & Sons, Deatsville, Kentucky,	15
Ewe, any age, Cal. Darnell, Indianapolis,	10

COMMITTEE—Martin Pearson, Greenwood, Ind.; E. H. Evans, Raglesville; Lee McDaniels, Rushville.

MIDDLE WOOL.

Buck, George Allen, Palamo, Illinois,	10
Buck having 5 best lambs, F. A. Byars, Simpsonville, Ky.,	15
Ewe, any age, George Allen, Palamo, Illinois,	10

COMMITTEE—Lee McDaniels, Rushville, Ind.; Harrison Nutgrass, Belmore, Ind.; Jasper Heck, Waldron, Ind.

H O G S.

DEMPSEY SEYBOLD, Superintendent.

CLASS XX.—Berkshire.

Boar, 2 years old and over, A. S. Gilmour & Co., Greensburg,	\$12
Second premium, Heck & McColley, Waldron, Shelby county, Indiana,	6
Boar, 1 year old and under 2, A. S. Gilmour & Co., Greensburg,	12
Second premium, James Riley, Thorntown, Boone county,	6
Boar, under 12 and over 6 months old, Heck & McColley, Waldron,	10
Second premium, A. C. Shortridge, Gem,	5
Boar, under 6 months old, James Riley, Thorntown,	5
Second premium, I. N. Barker, Thorntown,	3
Sow, 2 years old and over, A. S. Gilmour & Co., Greensburg,	12
Second premium, Heck & McColley, Waldron,	6
Sow, 1 year old and under 2, John M. Leech, Dunlapsville,	10
Second premium, Wesley White, Pendleton,	5
Sow, under 12 and over 6 months old, Wesley White, Pendleton,	5
Second premium, A. C. Shortridge, Gem,	3

Sow, under 6 months old, Heck & McColley, Waldron, . . .	\$5
Second premium, I. N. Barker, Thorntown, . . .	3
Five shoats under 6 months old, Heck & McColley, Waldron, . . .	10
Second premium, I. N. Barker, Thorntown, . . .	5
Sow, and not less than 5 sucking pigs, Jas. Riley, Thorntown, . . .	10
Second premium, J. F. Farris, New Maysville, . . .	5

COMMITTEE—Walter W. Fagins, Montgomery, Indiana;
J. B. Agnew, Winamac, Indiana; G. W. Sullins, Lafayette,
Indiana.

CLASS XXI.—Pland China.

Boar, 2 years old and over, A. E. Slaughter, South Charleston, Madison county, Ohio, . . .	\$12
Second premium, A. W. Ross, Muncie, Delaware county, . . .	6
Boar, 1 year old and under, A. E. Slaughter, South Charleston, O., . . .	12
Second premium, Shepard & Alexander, Charleston, Coles county, Illinois, . . .	6
Boar, under 12 and over 6 months old, A. S. Gilmour & Co., Greensburg, . . .	10
Second premium, W. A. Robbins & Co., Greensburg, . . .	5
Boar, under 6 months old, Lon Hunter, Morrow, Ohio, . . .	5
Second premium, A. W. Ross, Muncie, . . .	3
Sow, 2 years old and over, A. E. Slaughter & Co., South Charles- ton, Madison county, Ohio, . . .	12
Second premium, Lon Hunter, Morrow, Ohio, . . .	6
Sow, 1 year old and under 2, Shepard & Alexander, Charleston, Coles county, Illinois, . . .	10
Second premium, A. W. Ross, Muncie, . . .	5
Sow, under 12 and over 6 months old, S. S. Whiteside, Franklin, . . .	5
Second premium, A. E. Slaughter, South Charleston, Ohio, . . .	3
Sow, under 6 months old, A. E. Slaughter, South Charleston, O., . . .	5
Second premium, A. W. Ross, Muncie, . . .	3
Five shoats, under 6 months old, A. E. Slaughter, South Charles- ton, Ohio, . . .	10
Second premium, W. A. Robbins & Co., Greensburg, . . .	5
Sow, and not less than 5 sucking pigs, Mugg & Seagraves, Cen- ter, Howard county, . . .	10
Second premium, J. Heavenridge, Liberty, . . .	5

COMMITTEE—George W. King, Edinburg, Indiana;
S. K. Cofield, Bothe, Wayne county, Indiana; Arthur
Brooks, Greenfork, Wayne county, Indiana.

CLASS XXII.—Large White Breeds.

Boar, 1 year old and over, R. S. Russell, Zionsville, Boone co.,	\$12
Boar, under 12 and over 6 months old, R. S. Russell, Zionsville, Boone county,	10
Second premium, R. S. Russell, Zionsville, Boone county,	5
Boar, under 6 months old, I. N. Barker, Thorntown,	5
Second premium, R. S. Russell, Zionsville,	8
Sow, 2 years old and over, R. S. Russell, Zionsville	12
Sow, 1 year old and under 2, R. S. Russell, Zionsville,	10
Sow, under 12 and over 6 months old, R. S. Russell, Zionsville,	5
Sow, under 6 months old, I. N. Barker, Thorntown,	5
Second premium, R. S. Russell, Zionsville	3
Five shoats, under 6 months old, R. S. Russell, Zionsville,	10
Sow and not less than 5 sucking pigs, R. S. Russell, Zionsville,	10

COMMITTEE—Walter W. Fagins, Montgomery, Ind.;
G. W. Sullins, Lafayette, Ind.; J. B. Agnew, Winamac, Ind.

CLASS XXIII.—Suffolk, Essex and other Small Breeds, regardless of Color.

Boar, 1 year old and over, T. B. Bennington, Laporte, Lorain county, Ohio,	\$12
Second premium, Frank Wilson, Jackson, Michigan,	6
Boar, under 12 and over 6 months old, Frank Wilson, Jack- son, Michigan,	10
Second premium, Frank Wilson, Jackson, Michigan,	5
Boar, under 6 months old, Frank Wilson, Jackson, Michigan,	5
Second premium, Frank Wilson, Jackson, Michigan,	3
Sow, 2 years old and over, Frank Wilson, Jackson, Michigan,	12
Second premium, Frank Wilson, Jackson, Michigan,	6
Sow, 1 year old and under 2, Frank Wilson, Jackson, Michigan,	10
Second premium, Frank Wilson, Jackson, Michigan,	5
Sow, under 12 and over 6 months old, Frank Wilson, Jackson, Michigan,	5
Second premium, Frank Wilson, Jackson, Michigan	8
Sow, under 6 months old, Frank Wilson, Jackson, Michigan,	5
Second premium, Frank Wilson, Jackson, Michigan,	3
Five shoats, under 6 months old, Frank Wilson, Jackson, Mich.,	10
Second premium, Frank Wilson, Jackson, Michigan,	5
Sow, and not less than five sucking pigs, Frank Wilson, Jackson, Michigan,	10
Second premium, T. B. Bennington, Laporte, Ohio,	5

Boar, Jersey Red, Emsley Wright & Geo. Thayer, New Augusta, Marion county,	\$10
Sow, Jersey Red, Emsley Wright & Geo. Thayer, New Augusta, Marion county,	10

COMMITTEE — Walter W. Fagins, Montgomery, Ind.;
G. W. Sullins, Lafayette, Ind.; J. B. Agnew, Winamac,
Ind.

CLASS XXIV.—*Pland Chinas, Chester Whites, Jersey Reds, and
other large breeds.*

SWEEPSTAKES ON HOGS.

Boar, any age, A. E. Slaughter, S. Charleston, Madison co., Ohio, \$15	
Sow, any age, Shepard & Alexander, Charleston, Coles co., Ill. 15	
Herd of 1 boar and 5 sows, any one breed, regardless of age, size and color, all owned by one exhibitor, A. E. Slaugh- ter, S. Charleston, Madison county, Ohio,	25

Berkshire, Essex, Suffolks, and other small breeds.

Boar, any age, A. S. Gilmour & Co., Greensburg,	15
Sow, any age, Heck & McColley, Waldron,	15
Herd, 1 boar and 5 sows of any one breed, regardless of age, size or color, all owned by one exhibitor, A. S. Gil- mour & Co., Greensburg,	25

COMMITTEE — Warren Mason, Wabash, Ind.; Joseph
Cale, Poseyville, Ind.; D. F. Drook, Liberty, Ind.

POULTRY DEPARTMENT.

S. R. QUICK, Superintendent.

CLASS XXV.

Light Brahma fowls, G. A. Danley, Indianapolis,	\$3
Second premium, G. A. Danley, Indianapolis,	2
Light Brahma chicks, G. A. Danley, Indianapolis,	3
Second premium, G. A. Danley, Indianapolis,	2
Dark Brahma fowls, Sid Conger, Flat Rock, Shelby county,	3
Second premium, Holaday & McCracken, Monrovia, Mor- gan county,	2

Dark Brahma chicks, Sid Conger, Flat Rock,	\$3
Second premium, Holaday & McCracken, Monrovia,	2
Buff Cochin fowls, Sid Conger, Flat Rock,	3
Second premium, Josh Hollingsworth, Fairmont, Grant county,	2
Buff Cochin chicks, Sid Conger, Flat Rock,	3
Second premium, Sid Conger, Flat Rock,	2
Partridge Cochin fowls, B. F. Hill, Indianapolis,	3
Second premium, W. B. Shyrigh, Urbana, Ohio,	2
Partridge Cochin chicks, W. B. Shyrigh, Urbana, Ohio,	3
Second premium, Robert Bogue, Fairmont,	2
Pea Comb Partridge Cochin chicks, Indiana Poultry Yards, Indianapolis,	3
Second premium, Indiana Poultry Yards, Indianapolis,	2
White Cochin fowls, J. Heavenridge, Liberty, Union county,	3
Second premium, Carey Parrish, Shelbyville,	2
White Cochin chicks, Carey Parrish, Shelbyville,	3
Second premium, W. B. Shyrigh, Urbana, Ohio,	2
Black Cochin fowls, Thomas W. Pottage, Indianapolis,	3
Second premium, Thomas W. Pottage, Indianapolis,	2
Black Cochin chicks, Thomas W. Pottage, Indianapolis,	3
Second premium, Carey Parrish, Shelbyville,	2
Plymouth Rock fowls, Sid Conger, Flat Rock,	3
Second premium, Carey Parrish, Shelbyville,	2
Plymouth Rock chicks, Sid Conger, Flat Rock,	3
Second premium, Sid Conger, Flat Rock,	2
White Leghorn fowls, Tilson & Robison, Rocklane,	3
Second premium, Thomas W. Pottage, Indianapolis,	2
White Leghorn chicks, Tilson & Robison, Rocklane,	2
Second premium, Thomas W. Pottage, Indianapolis,	1
Brown Leghorn fowls, Thos. W. Pottage, Indianapolis,	3
Second premium, Thos. W. Pottage, Indianapolis,	2
Brown Leghorn chicks, Thos. W. Pottage, Indianapolis,	2
Second premium, H. C. Green, Indianapolis,	1
White F. black Spanish fowls, Stanton & Gregg, Greenwood,	2
Second premium, Stanton & Gregg, Greenwood,	1
White F. black Spanish chicks, Stanton & Gregg, Greenwood,	2
Second premium, Geo. W. Dunning, Marion, Grant Co.,	1
White C. B. Polish fowls, I. N. Barker, Thorntown, Boone Co.	2
White C. B. Polish chicks, Carey Parrish, Shelbyville,	2
Second premium, I. N. Barker, Thorntown,	1
Bearded W. C. W. Polish fowls, Mrs. Joseph E. Cobb, Indianapolis,	2

Bearded W. C. W. Polish chicks, Mrs. Joseph E. Cobb, Indianapolis,	\$2
Second premium, Mrs. Joseph E. Cobb, Indianapolis,	1
Houdan fowls, S. A. Thomas, Laporte,	3
Second premium, J. Fosdick, Laporte,	2
Houdan chicks, D. H. Jenkins, Indianapolis,	2
Second premium, D. H. Jenkins, Indianapolis,	1
Golden Hamburg fowls or chicks, Stanton & Gregg, Greenwood,	2
Second premium, Josh Hollingsworth, Fairmont,	1
Silver Hamburg fowls or chicks, Stanton & Gregg, Greenwood,	2
Second premium, Sid. Conger, Flat Rock,	1
Black breasted R. game fowls, S. A. Thomas & Co., Laporte,	2
Black breasted R. game chicks, S. A. Thomas & Co., Laporte,	2
Second premium, Abraham Findling, Indianapolis,	1
Black bred game bantam chicks, H. C. Green, Indianapolis,	2
Second premium, Holaday & McCracken, Monrovia, Morgan county,	1
Duck wing game bantam fowls or chicks, R. H. Obrist, Indianapolis,	2
Second premium, Wm. Seiders, Indianapolis,	1
Golden Sebright bantam fowls or chicks, I. N. Barker, Thorntown,	2
Second premium, I. N. Barker, Thorntown,	1
Silver Sebright bantam fowls or chicks, I. N. Barker, Thorntown,	2
Second premium, I. N. Barker, Thorntown,	1
Bronze turkeys, old birds, Frank Wilson, Jackson, Michigan,	4
Second premium, John Marvel, Royalton, Boone county,	2
Bronze turkeys, hatch of 1880, John Marvel, Royalton, Boone county,	2
White Holland turkeys, old birds, G. A. Danley, Indianapolis,	3
Second premium, H. C. Green, Indianapolis,	2
White Holland turkeys, hatch of 1880, G. A. Danley, Indianapolis,	2
Second premium, W. A. Cox, Brightwood,	1
Aylesbury ducks, Tilson & Robison, Rocklane,	2
Second premium, Stanton & Gregg, Greenwood,	1
Pekin ducks, Tilson & Robison, Rocklane,	2
Second premium, Tilson & Robison, Rocklane,	1
Rouen ducks, H. C. Green, Indianapolis,	2
Second premium, Stanton & Gregg, Greenwood,	1
Emden geese, Wm. A. Ennis, Clermont, Marion county,	3
Second premium, Wm. A. Ennis, Clermont, Marion county,	2
Toulouse geese, Wm. Norris, Indianapolis,	3
Chinese geese, Wm. A. Ennis, Clermont,	3

Wild geese, Wm. A. Ennis, Clermont,	\$3
Second premium, S. A. Thomas & Co., Laporte,	2
Heaviest live turkey, Frank Wilson, Jackson, Michigan,	5
Heaviest cock or cockerel pure breed, Robert Bogue, Fairmont, Grant county,	2
Heaviest hen or pullet, pure breed, Robert Bogue, Fairmont, Grant county,	2
Fine brood chicks under 1 week old, G. A. Danley, Indianapolis,	2
Best collection of rabbits, ferrets, guinea pigs and other small pet animals, Indiana Poultry Yards, Indianapolis,	5

NON-ENUMERATED POULTRY.

Black Leghorn chicks, Thomas W. Pottage, Indianapolis,	White Ribbon
White herons, W. H. Dye, Indianapolis,	White Ribbon
Shepherd, 1 bitch and litter of pups, Indiana Poultry Yards, Indianapolis,	White Ribbon
One dog, shepherd, Indiana Poultry Yards, Indianapolis,	White Ribbon
Black Hamburg chicks, Sid. Conger, Flat Rock, Shelby county,	Blue Ribbon
Red pile game bantam fowls, Sid. Conger, Flat Rock, Shelby county,	White Ribbon
Duck-wing game, S. A. Thomas & Co., Laporte,	White Ribbon
White Georgian game, S. A. Thomas & Co., Laporte,	White Ribbon
English red game, S. A. Thomas & Co., Laporte,	White Ribbon
Tartar game, S. A. Thomas & Co., Laporte,	White Ribbon
Counterfeit game, S. A. Thomas & Co., Laporte,	White Ribbon
Pigeons, F. W. Swartz, Indianapolis,	White Ribbon
White bantam fowls, Harry Newby, Indianapolis,	White Ribbon
Black Hamburg, Stanton & Gregg, Greenwood,	White Ribbon
Silver-gray Dorking, Stanton & Gregg, Greenwood,	White Ribbon
White bantam, Bertie Foltz, Indianapolis,	White Ribbon
White Georgian game fowls, Reginald Walker, Indianapolis,	Blue Ribbon
Collection pigeons, Indiana Poultry Yards, Indianapolis,	Blue Ribbon
White Muscovy ducks, Albert Lewis, Indianapolis,	Blue Ribbon
Duck and chicken (cross), Jane Somers, Indianapolis,	Blue Ribbon

COMMITTEE—Daniel White, New London, Huron county, Ohio.

AGRICULTURAL DEPARTMENT. *

J. W. COFIELD, Superintendent.

(None but actual producers can compete in Classes 26, 27, 28, 29.)

CLASS XXVI. — *Vegetables.*

Three cauliflowers, L. Zbinden, Indianapolis,	\$2
Six broccoli, J. H. Thomas, Lawrence, Marion county,	2
Six vegetable eggs, H. Adams, Logansport, Cass county,	2
Six cucumbers, Chas. Groeschel, North Indianapolis,	2
Peck white beans, John Marvel, Royalton, Boone county,	2
Two quarts Lima beans, John Marvel, Royalton, Boone county,	1
One-half gallon garden peas, dry, H. Adams, Logansport,	2
One-half gallon field peas, dry, J. H. Thomas, Lawrence,	2
One-half peck peppers for pickling, Jacob Traub, Indianapolis,	2
Peck tomatoes, Z. White, Lawrence,	3
Collection tomatoes, J. H. Thomas, Lawrence,	3
One-half dozen ears green sweet corn, Wm. A. Ennis, Clermont, Marion county,	2
Half peck dry sweet corn, W. A. Ennis, Clermont, Marion co.,	2
Three squashes, any kind, H. Adams, Logansport,	2
Three Yankee pumpkins, John Marvel, Royalton,	2
Half dozen nutmeg melons, John Marvel, Royalton,	2
Three watermelons, John Marvel, Royalton,	2
Three drumhead cabbage, J. H. Thomas, Lawrence,	2
Three flat Dutch cabbage, H. Adams, Logansport,	2
Three head cabbage, any kind, J. H. Thomas, Lawrence,	2
Dozen stalks celery, Chas. Groeschel, North Indianapolis,	2
Collection vegetables by one exhibitor, H. Adams, Logansport,	10
Second premium, J. A. Thomas, Lawrence,	5

COMMITTEE—R. S. Wells, Shelbyville, Indiana; L. W. Shelton, Rochester, Indiana; J. L. Sailors, Wabash, Ind.

CLASS XXVII.—*Root Crops.*

Half bushel turnips, Wm. A. Ennis, Clermont, Marion county,	\$2
Dozen parsnips, J. H. Thomas, Lawrence,	2
Dozen radishes, H. Adams, Logansport,	2
Dozen carrots, Charles Groeschel, North Indianapolis,	2
Dozen roots salsify, J. H. Thomas, Lawrence,	2

Dozen horseradish, J. H. Thomas, Lawrence,	\$2
Half dozen beets (red) Frank Williamson, Nora, Marion co.,	2
Half dozen turnip beets, L. Zbinden, Indianapolis,	2
Half dozen sugar beets, J. H. Thomas, Lawrence,	2
Half peck red onions, J. H. Thomas, Lawrence,	2
Half peck yellow onions, G. A. Danley, Indianapolis,	2
Half peck white onions, Frank Williamson, Nora,	2
Dozen turnip radishes, Charles Groeschel, North Indianapolis,	1
Dozen long radishes, H. Adams, Logansport,	1
Display of onions in variety and quality, H. Adams, Logansport,	3

COMMITTEE—R. S. Wells, Shelbyville, Ind.; J. L. Sailors, Wabash, Ind.; L. W. Shelton, Rochester, Ind.

CLASS XXVIII.—*Potatoes.*

Peck pink peach blow, Andrew Martin, Muncie, Delaware co.,	\$3
Peck white peach blow, Andrew Martin, Muncie, Delaware co.,	3
Peck early rose, Henry A. Smith, Danville, Hendricks county,	3
Peck snow flake, Henry A. Smith, Danville, Hendricks county,	3
Peck pink eyes, Wm. A. Ennis, Clermont, Marion county,	3
Peck Shaker russett, H. Adams, Logansport, Cass county,	3
Peck peerless, H. Adams, Logansport, Cass county,	3
Half bushel any variety, H. Adams, Logansport, Cass county,	3
Half bushel sweet potatoes, J. H. Thomas, Lawrence, Marion county,	3
Peck early potatoes, any kind, Wm. A. Ennis, Clermont,	3
Peck late potatoes, any kind, H. Adams, Logansport,	3
Collection Irish potatoes, not less than ten varieties, H. Adams, Logansport,	5

COMMITTEE—R. S. Wells, Shelbyville, Ind.; L. W. Shelton, Rochester, Ind.; J. L. Sailors, Wabash, Ind.

CLASS XXIX.—*Grain and Seeds.*

(Grain in this class must have been grown within the year exhibited.)

Half bushel early field Dent corn in ear, Z. White, Lawrence, Marion county,	5
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Half bushel yellow corn in ear, J. A. Heavenridge, Liberty, Union county,	\$5
Second premium, J. White, Lawrence,	2
Half bushel white corn in ear, Otha Hayes, Elizabethtown, Ohio	5
Second premium, A. C. Swift, Bentonville, Fayette county	2
Half bushel corn any color, Charley Dawson, Broad Ripple, Marion county,	5
Second premium, Otha Hayes, Elizabethtown, O.,	2
Half bushel hominy corn, J. A. Heavenridge, Liberty,	2
Display and greatest variety wheat, not less than half gallon each variety, John Marvel, Royalton, Boone county, . .	10
Half bushel white wheat, Wm. A. Ennis, Clermont, Marion Co.	5
Second premium, A. C. Swift, Bentonville, Fayette Co., . .	2
Half bushel red wheat, Henry Smith, Danville, Hendricks Co.	5
Second premium, R. F. Prichard, Edinburg, Johnson Co.,	2
Half bushel spring wheat, John Marvel, Royalton,	5
Second premium, Wm. A. Ennis, Clermont,	2
Half bushel rye, Wm. A. Ennis, Clermont,	2
Half bushel oats, R. F. Prichard, Edinburg,	2
Half bushel buckwheat, John Marvel, Royalton,	2
Half bushel barley, Hulbert Hayes, Elizabethtown, O.,	2
Half bushel flaxseed, R. F. Prichard, Edinburg,	2
Half bushel millet seed, Wm. A. Ennis, Clermont,	2
Half bushel timothy seed, John Marvel, Royalton,	2
Half bushel orchard grass, Wm. A. Ennis, Clermont,	2
Half bushel Kentucky blue grass seed, R. F. Prichard, Edinburg,	2
Half bushel English blue grass seed, Wm. A. Ennis, Clermont,	2
Half bushel red top grass seed, Wm. A. Ennis, Clermont, . . .	2
Half bushel red clover seed, R. F. Prichard, Edinburg, . . .	2
Half bushel English cloverseed, Andrew Martin, Muncie, . . .	2

COMMITTEE—R. S. Wells, Shelbyville, Ind.; J. L. Sailors, Wabash, Ind.; L. W. Shelton, Rochester, Ind.

CLASS XXX—Butter, Cheese and Honey.

Thirty pounds creamery butter, Excelsior Creamery Company, Indianapolis,	\$8 and Diploma
Second premium, E. Caldwell & Co., Harrisburg, Fayette county,	4
Five pounds dairy butter, G. A. Danley, Indianapolis,	5
Second premium, Mrs. Anna Dilling, Hagerstown, Wayne county,	3

Thirty pounds factory cheese, E. Caldwell & Co., Harrisburg, Fayette county,	\$8 and Diploma
Second premium, Excelsior Creamery Co., Indianapolis, . .	4
Ten pounds comb honey, in packages of 1 lb. or more, Frank L. Dougherty, Indianapolis,	5
Ten or more 1 lb. packages extracted honey, Frank L. Dough- erty, Indianapolis,	5
Crate of honey in comb, in most marketable shape, Frank L. Dougherty, Indianapolis,	6
Display of honey, comb and extracted, Frank L. Dougherty, Indianapolis,	5
Display wax, Frank L. Dougherty, Indianapolis,	2
Machine for extracting honey, Frank L. Dougherty, In- dianapolis,	Diploma
Display bee-keeping supplies, Frank L. Dougherty, In- dianapolis,	Diploma

COMMITTEE—R. S. Wells, Shelbyville, Ind.; J. L. Sail-
ors, Wabash, Ind.; L. W. Shelton, Rochester, Ind.

CLASS XXXI.—*Cured Meats, Groceries, Flour, Crackers, etc.*

Sack corn meal, O. H. Hays, Indianapolis,	\$2
Sample grits, O. H. Hays, Indianapolis,	3
Sample hominy, O. H. Hays, Indianapolis,	2

NON-ENUMERATED.

Hominy feed, O. H. Hays, Indianapolis,	Meritorious
Corn flour, O. H. Hays, Indianapolis,	Meritorious
Thorley food for horses, cattle, etc., Thorley Food Co., Chicago, Ill.,	Meritorious
Self-raising flour, Geo. V. Hecker & Co., Chicago, Ill., {	Excellent &
Three sweet pumpkins, John Marvel, Royalton, Boone county,	Unsurpassed
	Meritorious

COMMITTEE—R. S. Wells, Shelbyville, Ind.; J. L. Sail-
ors, Wabash; L. W. Shelton, Rochester; M. G. Warren.

HORTICULTURAL DEPARTMENT.

L. B. CUSTER, Superintendent.

CLASS XXXII.—*Amateurs' List.*

APPLES.

Twenty varieties of apples, Mrs. Andrew Wallace, Indianapolis,	\$15
Twelve varieties of apples, A. B. Shelledy, Danville, Hendricks county,	10
Six varieties of apples, Mrs. Andrew Wallace, Indianapolis, . .	5

PEARS.

Ten varieties of pears, Mrs. Andrew Wallace, Indianapolis, . .	10
Five varieties of autumn pears, Mrs. Andrew Wallace, Ind'polis, .	5

PEACHES.

Three varieties of peaches, A. B. Shelledy, Danville,	3
One variety of peaches, Henry Eickhoff, Sr., Indianapolis, . .	2

GRAPES, GROWN IN OPEN AIR.

Five varieties of grapes, Cornelius O'Haver, Danville,	5
Three varieties of grapes, Mrs. Andrew Wallace, Indianapolis, .	3
Five clusters of grapes, any kind, Cornelius O'Haver, Danville, .	2

QUINCES.

Show of quinces, not less than 12 specimens, Mrs. A. Wallace, Indianapolis,	3
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DISPLAY OF FRUITS.

Display of fruits of all kinds, Mrs. A. Wallace, Indianapolis, . .	25
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COMMITTEE—H. Mankedick, Indianapolis, Indiana; John Freeman, Knightstown, Indiana; James Gilbert, Terre Haute, Indiana.

CLASS XXXIII.—*Professional List.*

APPLES.

Twenty varieties of apples, E. A. Eickhoff, Indianapolis,	\$15 and Diploma
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Ten varieties of apples, W. A. Ragan, Clayton, Hendricks county, . . . \$10 and Diploma
Six varieties of apples, E. A. Eickhoff, Indianapolis, 5 and Diploma

PEARS.

Ten varieties of pears, W. A. Ragan, Clayton, . . . 10 and Diploma
Four varieties of autumn pears, E. A. Eickhoff, Indianapolis, . . . 5 and Diploma

PEACHES.

Display of peaches, not less than 5 varieties, W. A. Ragan, Clayton, . . . 5 and Diploma

NATIVE GRAPES.

Five varieties of grapes, W. A. Ragan, Clayton, . . \$5 and Diploma
Three varieties of grapes, W. A. Ragan, Clayton, . . 3 and Diploma
One variety of grapes, 10 clusters, W. A. Ragan, Clayton, . . . 2 and Diploma

We, your committee, find on the table, plate of *Prentiss grape* from T. S. Hubbard, Fredonia, N. Y, which is a beautiful white grape of great promise. }

QUINCES.

Collection of quinces, not less than twelve specimens, G. Poindexter & Son, Blue Lick, Clark county, . . . \$3 and Diploma

DISPLAY OF FRUITS.

Display of fruits of all kinds, W. A. Ragan, Clayton, . . . \$25 and Diploma

Collection of nursery stock, arranged for exhibition adjoining Floral Hall, E. A. Eickhoff, Indianapolis, . . . 15 and Diploma

T. C. Barnum's collection of nursery stock was not properly entered but found meritorious by the committee.

COMMITTEE—John Freeman, Knightstown, Ind.; James Gilbert, Terre Haute, Ind.; Henry Mankedick, Indianapolis, Ind.

CLASS XXXIV.—*Flowers and Plants—Professional List.*

General collection of plants, Reiman Bros., Indianapolis, . . \$20
Second premium, Chas. Groeschel, N. Indianapolis, . . 10

Collection of ornamental foliage plants, Reiman Bros., Indianapolis,	\$10
Second premium, Chas. Groeschel, N. Indianapolis,	5
Collection licopods and ferns, Reiman Bros., Indianapolis,	5
Display and variety of climbers, Reiman Bros., Indianapolis,	5
Second premium, Chas. Groeschel, N. Indianapolis,	3
Collection begonias, Reiman Bros., Indianapolis,	5
Second premium, Chas. Groeschel, N. Indianapolis,	3
Collection of new and rare plants, Reiman Bros., Indianapolis,	5
Second premium, Chas. Groeschel, N. Indianapolis,	2
Display and variety of cacti, aloes and agaves, Chas. Groeschel, N. Indianapolis,	4
Second premium, Reiman Bros., Indianapolis,	2
Collection of geraniums in bloom, Reiman Bros., Indianapolis,	4
Second premium, Chas. Groeschel, North Indianapolis,	2
Collection of foliage geraniums, Reiman Bros., Indianapolis,	3
Second premium, Chas. Groeschel, N. Indianapolis,	2
Collection bedding plants, Reiman Bros., Indianapolis,	8
Second premium, Chas. Groeschel, N. Indianapolis,	4
Specimen of palm, Reiman Bros., Indianapolis,	2
Specimen of alacassia, Chas. Groeschel, N. Indianapolis,	2
Second premium, Reiman Bros., Indianapolis,	1
Specimen of canna, Reiman Bros., Indianapolis,	2
Second premium, Chas. Groeschel, N. Indianapolis,	1
Specimen variegated leaved plants, Reiman Bros., Indianapolis,	2
Second premium, Chas. Groeschel, N. Indianapolis,	1
Suspended basket, Reiman Bros., Indianapolis,	2
Second premium, Chas. Groeschel, N. Indianapolis,	1
Arranged wardian case, Reiman Bros., Indianapolis,	3
Collection fuchias in bloom, Reiman Bros., Indianapolis,	3
Collection of loose cut flowers, Reiman Bros., Indianapolis,	8
Second premium, Chas. Groeschel, N. Indianapolis,	5
Basket of cut flowers, Reiman Bros., Indianapolis,	4
Second premium, Bertermann Bros., Indianapolis,	2
Arrangement and display of dahlias, Bertermann Bros., Indianapolis,	4
Collection baskets, boquets and floral designs, Bertermann Bros., Indianapolis,	10
Second premium, Reiman Bros., Indianapolis,	5
Three designs for funerals, Reiman Bros., Indianapolis,	8
Second premium, Bertermann Bros., Indianapolis,	4
Bridal boquet, Reiman Bros., Indianapolis,	2
Second premium, Chas. Groeschel, N. Indianapolis,	1

PREMIUM AWARDS.

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Pyramid bouquet, Reiman Bros., Indianapolis,	\$2
Second premium, Chas. Groeschel, N. Indianapolis,	1
Display and arrangement of cut roses, Chas. Groeschel, N. Indianapolis,	5

COMMITTEE—John Freeman, Knightstown, Ind.; Maria Willey, P. A. Wilson.

CLASS XXXV.—*Amateur's List.*

Collection of cut flowers, Mrs. Dr. Dudley Rogers, Greencastle, \$10	
Collection cut roses, not less than 10 varieties, Mrs. Dr. Dudley Rogers, Greencastle,	5
Collection cut verbenas, L. Zbinden, Indianapolis,	3
Second premium, Frank Williamson, Nora, Marion county,	1
Basket of cut flowers, Mrs. Dr. D. Rogers, Greencastle,	3
Second premium, Mrs. M. T. Stewart, Indianapolis,	2
Round bouquet, Mrs. M. T. Stewart, Indianapolis,	3
Second premium, Miss Anna Redmond, Indianapolis,	2
Flat bouquet, Miss Mary Hanna, Fort Wayne,	3
Second premium, Mrs. T. A. Loyd, Indianapolis,	2

COMMITTEE—John G. Heintz, Terre Haute, Ind.; L. M. Pratt, Indianapolis, Ind.; John Freeman, Knightstown, Ind.

TEXTILE FABRICS DEPARTMENT.

JACOB MUTZ, Superintendent.

CLASS XXXVI.—*Mill Manufactured.*

Best plaid flannels, J. Leibhard, Knightstown,	Silver Medal
Best flannel sheeting, cotton warp, J. Leibhard, Knightstown, Henry county,	Silver Medal

COMMITTEE—Laura McDonough, Anderson, Ind.; Jennie E. Patterson, Princeton, Ind.; R. S. Wells, Shelbyville, Ind.

WOMAN'S DEPARTMENT.

MRS. MARY E. HAGGART, Superintendent.

CLASS XXXVII.—*Domestic Manufactures.*

All wool coverlet, Jennie Lackey, Cambridge City,	\$2
Cotton coverlet, Mrs. Adams, Logansport,	2
Wool and cotton coverlet, Mrs. W. H. Vincent, Indianapolis, . .	2
Woolen double coverlet, Mrs. Jacob Parrish, Indianapolis, . .	2
Cotton double coverlet, Mrs. Adams, Logansport,	2
Wool and cotton double coverlet, Mrs. Jacob Parrish, Indiana- polis,	2
Pair blankets, Mrs. S. Harlan, Greensburg,	3
Counterpane, Mrs. W. H. Vincent, Indianapolis,	2
Counterpane, knit, Mrs. Maria John, Indianapolis,	2
Counterpane, crochet, Mrs. R. C. Belt, Milford, Ohio,	2
Ten yards jeans, Mrs. J. Leibhard, Knightstown,	2
Ten yards table linen, Mrs. S. Harlan, Greensburg,	2
Ten yards linsey, Mrs. J. Leibhard, Knightstown,	1
Ten yards plain flannel, Mrs. J. Leibhard, Knightstown,	2
Ten yards plaid flannel, Mrs. Jacob Parrish, Indianapolis, . .	2
Ten yards rag carpet, E. M. Homer, Knightstown,	2
Ten yards woolen carpet, Mrs. Grooms, Gallatin, Tenn.,	2
Pound flax thread, Mrs. M. Caylor, Indianapolis,	1
Quilted skirt, Mrs. S. Harlan, Greensburg,	1
Silk comforter, Mrs. S. Harlan, Greensburg,	2
Calico quilt, Mrs. Lizzie Boadwee, Terre Haute,	2
Worsted quilt, Mrs. A. B. Bosserman, Indianapolis,	3
Second premium, Mrs. E. J. Springer, Lawrence, Marion county,	2
Silk quilt, Mrs. A. B. Bosserman, Indianapolis,	5
Second premium, Mrs. T. E. Reynolds, Noblesville,	3
White quilt, Mrs. Grooms, Gallatin, Tenn.,	2
Second premium, Miss E. Wells, Shelbyville,	1
Floor mat, worsted, Mrs. Jennie Howard, Anderson,	2
Floor mat, rag, Mrs. Grooms, Gallatin, Tenn.,	1
Hearth rug, Mrs. Adams, Logansport,	2
Second premium, Mrs. Adams, Logansport,	1
Collection of domestic goods, Elizabeth Fear, Edinburg, Diploma	

COMMITTEE—Mrs. M. F. Lindsay, Kokomo, Ind.; Mrs.
M. J. Harlan, Danville, Ind.

GLASS XXXVIII.—Knitting and Crochet Work.

Infant's knit or crochet shirt, Mrs. G. W. Dunning, Marion, Grant county,	\$1
Infant's knit or crochet socks, Mrs. J. E. Howe, Muncie, Delaware county,	1
Pair knit or crochet mittens, Mrs. L. Oursler, Noblesville,	1
Pair woolen stockings or socks, Mrs. Cleary, Indianapolis,	1
Pair cotton stockings or socks, Mrs. C. C. Burns, Greensburg,	1
Knit or crochet shawl, Miss Ida A. James, Irvington,	2
Knit or crochet slippers, Mrs. DeMattoes, Indianapolis,	1
Knit or crochet hood, Miss Ida A. James, Irvington,	1
Knit or crochet child's cloak, Mrs. R. C. Belt, Milford, O.,	2
Knit or crochet fascinator, Mrs. R. C. Belt, Milford, O.,	1
Knit or crochet sacque, Mrs. J. Leibhard, Knightstown,	1
Knit or crochet lady's scarf, Mrs. D. J. Kuhn, Lawrence, Marion county,	1
Knit or crochet gentleman's scarf, Mrs. E. M. Homer, Knightstown,	1
Crochet cotton tidy, Mrs. Chas. Johnson, Indianapolis,	1
Crochet worsted tidy, Mrs. E. F. Moore, Indianapolis,	1
Afghan, Mrs. John R. Ross, Indianapolis,	3
Second premium, Mrs. J. E. Howe, Muncie,	2
Afghan, infant's, Mrs. E. F. Moore, Indianapolis,	2
Second premium, Mrs. E. M. Homer, Knightstown,	1
Fancy knitting specimens, Mrs. J. E. Howe, Muncie,	1

COMMITTEE—Mrs. M. F. Lindsay, Kokomo, Ind.; Mrs. M. J. Harlan, Danville, Ind.

CLASS XXXIX—Lace Work.

Point lace embroidery specimen, Mrs. M. Posz, Shelbyville,	\$5
Second premium, Mrs. C. C. Burns, Greensburg,	3
Third premium, Mrs. M. Posz, Shelbyville,	2
Point lace guipure specimen, Catharine Panyard, Indianapolis,	3
Second premium, Mrs. Mooney, Columbus,	2
Pillow lace specimen, Mrs. E. F. Moore, Indianapolis,	2
Darning on net specimen, Mrs. John Tarlton, Indianapolis,	2
Second premium, Mrs. Emma A. Zink, Indianapolis,	1
Applique lace, specimen, Mrs. M. Posz, Shelbyville,	2
Second premium, Mrs. Alice S. Moore, Greensburg,	1
Crochet lace display, Miss Dollie Jonas, Indianapolis,	2

Knit lace display, Mrs. Malinda L. Murphey, Indianapolis,	\$2
Tatting display, Mrs. A. B. Bosserman, Indianapolis,	2
Breton lace display, Mrs. E. M. Rittenhouse, Indianapolis,	2
Macrame lace display, Mrs. J. E. Howe, Muncie,	2

COMMITTEE—Mrs. J. R. Wood, Covington, Ind.; Mrs. M. E. Moody, Franklin, Ind.

CLASS XL.—Embroidery and Braiding.

Embroidery, with linen floss, specimen, Mrs. C. C. Burns, Greensburg,	\$2
Second premium, Mrs. C. C. Burns, Greensburg,	1
Embroidery, chemise, Mrs. M. Posz, Shelbyville,	2
Second premium, Mrs. Lou Ball, Crawfordsville,	1
Embroidery, yoke and sleeves, Mrs. C. C. Burns, Greensburg,	2
Second premium, Mrs. Carrie Learcy, Indianapolis,	1
Embroidery, night dress, Mrs. Lou Ball, Crawfordsville,	2
Second premium, Mrs. M. Posz, Shelbyville,	1
Embroidery, child's dress, Mrs. J. E. Howe, Muncie,	2
Second premium, Mrs. J. M. Vinby, Muncie,	1
Embroidery, table set, Mrs. C. C. Burns, Greensburg,	2
Second premium, Mrs. C. C. Burns, Greensburg,	1
Embroidery, bed set, Mrs. E. C. Buskirk, Indianapolis,	3
Embroidery, handkerchief, Mrs. C. C. Burns, Greensburg,	1
Embroidery, silk specimen, Mrs. E. W. Bacon, Indianapolis,	2
Embroidery, silk stockings, Mrs. W. J. Carleton, Indianapolis,	1
Embroidery, silk slippers, Mrs. J. D. Leibhard, Knightstown,	1
Embroidery, silk skirt, Mrs. J. D. Leibhard, Knightstown,	2
Embroidery, silk infant's shawl, Mrs. Miles Burford, Indianapolis,	2
Second premium, Mrs. M. Posz, Shelbyville,	1
Embroidery, skirt, worsted, Mrs. C. C. Burns, Greensburg,	2
Embroidery, table cover, Mrs. A. M. Robertson, Indianapolis,	3
Second premium, Mrs. J. E. Howe, Muncie,	2
Embroidery, ottoman cover, Mrs. A. B. Bosserman, Indianapolis,	2
Second premium, Miss Ida A. James, Irvington,	1
Embroidery, chair cover, Miss Ida A. James, Irvington,	2
Embroidery, chair cushion, Mrs. J. Leibhard, Knightstown,	2
Embroidery, sofa cushion, Miss Mollie Dietz, Indianapolis,	2
Second premium, Mrs. James R. Ross, Indianapolis,	1
Embroidery, toilet cushion, Mrs. J. Liebhard, Knightstown,	2
Second premium, Miss Ida A. James, Irvington,	1
Embroidery, pin-cushion, Miss Kate Ryan, Indianapolis,	1

Embroidery, bead specimen, Mrs. J. Liebhard, Knightstown, .	\$2
Second premium, Mrs. J. Liebhard, Knightstown, .	1
Embroidery, applique specimen, Mrs. A. M. Robertson, Indianapolis, .	2
Second premium, Mrs. M. Posz, Shelbyville, .	1
Embroidery, gem stitch specimen, Mrs. N. Gerauld, Princeton, Gibson county, .	1
Embroidery, outline or etching display, Mrs. J. E. Howe, Muncie, .	2
Embroidery, outline or etching specimen, A. M. Robertson, Indianapolis, .	1
Embroidery, kensington, specimen, Mrs. L. E. Smith, Ind'polis, .	3
Second premium, specimen, Mrs. Sadie Forker, Burlington, Iowa, .	2
Embroidery, tapestry, display, Mrs. A. M. Robertson, Indianapolis, .	Diploma
Embroidery, tapestry, specimen, Mrs. A. M. Robertson, Ind'polis, .	2
Embroidery, art in colors, display, Mrs. W. J. Carleton, Indianapolis, .	Diploma
Embroidery, art in colors, specimen, Mrs. A. M. Robertson, Indianapolis, .	3
Second premium, Mrs. G. W. Dunning, Marion, Grant co., .	2
Chenille, specimen, Miss Jennie Lackey, Cambridge City, .	3
Second premium, Miss Mollie Holdeman, Indianapolis, .	2
Braiding, display, Mrs. C. C. Burns, Greensburg, .	2
Braiding, specimen, Mrs. R. C. Belt, Milford, Ohio, .	1

COMMITTEE—Belle Cooley, Crawfordsville, Indiana; Mrs. J. W. Shideler, Marion, Grant county, Indiana.

CLASS XLI.—Sewing—Machine and Hand.

Machine-work, 5 articles, Mrs. S. Harlan, Greensburg, .	\$3
Machine-work, shirt, Mrs. Grooms, Gallatin, Tenn., .	1
Machine-work, calico dress, Mrs. R. L. Carlin, Indianapolis, .	1
Hand-sewing, garment, Mrs. Grooms, Gallatin, Tenn., .	1
Hand-sewing, shirt, Mrs. Grooms, Gallatin, Tenn., .	1
Gent's cloth coat, made by a woman, Mrs. E. M. Homer, Knightstown, .	5
Pair pants, made by a woman, Mrs. E. M. Homer, Knightstown, .	2
Vest, made by a woman, Mrs. Grooms, Gallatin, Tenn., .	1
Boys suit, Mrs. E. Kirk, Shelbyville, .	2
Darning on old garment, Mrs. A. B. Bosserman, Indianapolis, .	1
Buttonholes, display on different materials, Mrs. Catharine McAree, Indianapolis, .	1

COMMITTEE—Belle Cooley, Crawfordsville, Ind.; Mrs. J. W. Shideler, Marion, Grant county, Ind.

CLASS XLII.—Miscellaneous.

Wax flowers, Mrs. John Newman, Indianapolis,	\$3
Wax fruit, Mrs. C. DeLille, Indianapolis,	3
Wax work, ornamental, Mrs. D. O. Crist, Indianapolis,	3
Decalcomania, or transfer work, display, Miss Alice Belles, Indianapolis,	1
Bead work, display, Mrs. W. J. Carleton, Indianapolis,	2
Card receiver, Sue M. Ketcham, Indianapolis,	1
Handkerchief box, Mrs. L. E. Smith, Indianapolis,	1
Glove box, Mrs. E. M. Homer, Knightstown,	1
Spatter work, on card board, specimen, Mrs. E. C. Buskirk, Indianapolis,	1
Spatter work, on cloth, specimen, Mrs. E. M. Homer, Knightstown,	1
Sea moss ornament, Mrs. Dr. Hazzard, Edinburg,	2
Wood moss ornament, Mrs. E. Rohrer, Indianapolis,	1
Skeleton leaves and ferns, Mrs. Allen Lloyd, Cincinnati, Ohio,	2
Fish scale ornaments, Mrs. Lizzie Boadwee, Terre Haute,	1
Toilet cushion, not embroidered, Mrs. L. E. Smith, Indianapolis,	2
Second premium, Mrs. Miles Burford, Indianapolis,	1
Sofa pillow, not embroidered, Mrs. J. E. Howe, Muncie,	2
Second premium, Mrs. Georgia Huston, Indianapolis,	1
Lamp mats, fancy, Mrs. M. Posz, Shelbyville,	1
Toilet set, Sue M. Ketcham, Indianapolis,	2
Infant's nursery basket, Mrs. J. E. Howe, Muncie,	1
Worsted work, not tapestry, Mrs. W. B. Smith, Indianapolis,	2
Picture, tapestry work, Mrs. Sue Ewing, New Home, Bates co., Missouri,	3
Chair stripes, Mrs. W. J. Carleton, Indianapolis,	2
Lambrequins, Mrs. J. E. Howe, Muncie,	2
Tidy, not crochet, Mrs. Dr. Brower, Lawrenceburg,	2
Second premium, Mrs. A. M. Robertson, Indianapolis,	1
Stuffed birds, collection, Mrs. M. M. Duncan, Westville,	5
Second premium, Mrs. Dr. Hazzard, Edinburg,	3
Stuffed animals, collection, Mrs. M. M. Duncan, Westville,	8
Second premium, Mrs. Dr. Hazzard, Edinburg,	4
Painting on silk or satin, display, Mrs. L. E. Smith, Indianapolis,	5
Second premium, Sue M. Ketcham, Indianapolis,	3
Painting on tiles, display, Mrs. Ben. Harrison, Indianapolis,	3
Painting on panels, display, Sue M. Ketcham, Indianapolis,	3
Painting on wood, display, Sue M. Ketcham, Indianapolis,	2

Painted fan, Sue M. Ketcham, Indianapolis,	1
Painted work, miscellaneous, Sue M. Ketcham, Indianapolis,	Diploma
Decorated china display, Mrs. Ben Harrison, Indianapolis,	\$5
Second premium, Sue M. Ketcham, Indianapolis,	8
Decorated china, specimen, Sue M. Ketcham, Indianapolis,	2
Pottery, made and decorated by exhibitor, display, Sue M. Ketcham, Indianapolis,	8
Fret sawing, display, Miss M. Tarbell, Indianapolis,	2
Inlaid work, display, Miss M. Tarbell, Indianapolis,	3
Design for a dwelling house, by a woman, Mrs. E. C. Buskirk, Indianapolis,	2
Kindergarten work, Miss Chapin, Indianapolis,	Diploma

COMMITTEE—Mrs. M. E. Crist, Crawfordsville, Ind.;
Jennie E. Patterson, Princeton, Ind.

CLASS XLIII.—Dry Goods, Millinery, Etc.

Display of fancy goods, the Misses Lueders, Indianapolis,	Diploma
Display of hair goods and work, Mrs. C. Thompson, Chicago, Illinois,	Diploma
Display of millinery, William Woodbridge, Indianapolis,	Diploma
Two bonnets, William Woodbridge, Indianapolis,	Diploma

COMMITTEE—Juliet R. Wood, Covington, Ind.; M. E. Moody, Franklin, Ind.

CLASS XLIV.—Culinary Articles.

Butter, home-made, 5 pounds, exhibited by a woman, Mrs. Geo. Jackson, Ingallston, Marion county,	\$3
Second premium, Mrs. G. A. Danley, Indianapolis,	2
Honey in comb, 5 pounds, exhibited by a woman, M. A. McLane, Shelbyville,	8
Second premium, Mrs. Kate Dougherty, Indianapolis,	2
Bread, loaf wheat, hop yeast, home-made, Mrs. W. M. Voorhis, Lawrence,	8
Second premium, Mrs. A. B. Bosserman, Indianapolis,	2
Bread, salt-rising, home-made, Mrs. G. A. Danley, Indianapolis,	8
Second premium, Mrs. A. B. Bosserman, Indianapolis,	2
Bread, brown, home-made, Mary Gearheart, Indianapolis,	2
Second premium, Mrs. W. M. Voorhis, Lawrence,	1
Bread, corn, Mrs. G. A. Danley, Indianapolis,	1

Rusks, Mary Gearheart, Indianapolis,	\$2
Light rolls, Mrs. G. A. Danley, Indianapolis,	2
Cake, sample, home-made, Ida A. James, Irvington,	3
Second premium, Mrs. Dr. Hazzard, Edinburg,	2
Cake, collection, made by one exhibitor, Lottie Spicer, Shelbyville,	5
Second premium, Miss Mary Barnhart, Indianapolis,	3
Catsup, collection, Mary Gearheart, Indianapolis,	1
Jellies, collection, Mrs. E. M. Homer, Knightstown,	3
Second premium, Mrs. Grooms, Gallatin, Tenn.,	2
Preserves, collection, 1 pint each, Grace D. Levering, Indianapolis,	3
Second premium, Mrs. S. P. Grubb, Indianapolis,	2
Pickles, collection, Miss Fanny Melick, Indianapolis,	2
Dried fruit, collection, 1 pound each, Miss Mary Barnhart, Indianapolis,	2
Canned fruit, collection, Mrs. Ellen Armstrong, Indianapolis,	5
Hard and soft soap, collection, Miss Fanny Melick, Indianapolis,	2
Second premium, Mrs. R. J. Munsell, Indianapolis,	1
Maple molasses, half gallon, Jacob Parrish, Indianapolis,	1
Tomato catsup, 1 pint, Mary Gearhart, Indianapolis,	2
Confectionery, display, Daggett & Co., Indianapolis,	Diploma

COMMITTEE—Mrs. Geo. Hayward, Terre Haute, Ind.;
Mrs. Laura McDonough, Anderson, Ind.

CHILDREN'S DEPARTMENT.

(This department is open to girls and boys under sixteen years of age at the time of the fair.)

CLASS XLV.

Loaf wheat bread, yeast, Mattie Hester, Indianapolis,	\$2
Second premium, Lillie Homer, Knightstown,	1
Loaf wheat bread, salt-rising, Hattie Pickerill, Indianapolis,	2
Second premium, Lillie Homer, Knightstown,	1
Cakes, Grace Bugby, Indianapolis,	3
Second premium, Ida C. Norwood, Indianapolis,	2
Jellies, collection, Susie M. Davis, Indianapolis,	2
Second premium, Lillie Homer, Knightstown,	1

Hand-sewing, chemise, Yuba Burns, Greensburg,	\$1
Hand-sewing, garment, Yuba Burns, Greensburg,	1
Patching on old garment, display, Lillie Homer, Knightstown,	2
Second premium, Lizzie Dickson, Cana, Jennings county,	1
Darning on old garment, display, Lillie Homer, Knightstown,	2
Embroidery, yoke and sleeves, Yuba Burns, Greensburg,	2
Embroidery, darning on net, Nelia Criqui, Indianapolis,	1
Embroidery, worsted specimen, Yuba Burns, Greensburg,	2
Embroidery, silk specimen, Lavina Morehead, Muncie,	2
Second premium, Yuba Burns, Greensburg,	1
Crochet work, display, Lavina Morehead, Muncie,	2
Second premium, Daisy James, Irvington,	1
Pair knit stockings, Yuba Burns, Greensburg,	1
Pair knit mittens, Goldie Ingles, Irvington,	1
Tidy, Stella Wiles, Indianapolis,	2
Second premium, Gertrude Ellms, Indianapolis,	1
Pin cushion, Lavina Morehead, Muncie,	1
Toilet set, Lavina Morehead, Muncie,	2
Second premium, Lillie Homer, Knightstown,	1
Picture in needle-work, Jennie Mooney, Columbus,	2
Perforated card board work, display, Lavina Morehead, Muncie,	2
Air castle, Kittie J. Rowe, Indianapolis,	1
Picked work, display, Belle Bone, Indianapolis,	1
Wax work, specimen, Sammy Grubbs, Indianapolis,	1
Autumn leaves, wax, Nellie Robinson, Indianapolis,	1
Painting on wood, display, Martina Grubbs, Indianapolis,	2
Fret sawing, display, Jessie Fisher, Indianapolis,	2
Minerals, collection named, Fletcher M. Noe, Indianapolis,	1
Butterflies and other insects, Fletcher M. Noe, Indianapolis,	2
Second premium, Fletcher M. Noe, Indianapolis,	1
Collection, stamps and curiosities, Fletcher M. Noe, Indianapolis,	1

WOMAN'S DEPARTMENT.

NON-ENUMERATED LIST.

Water color painting, Daisy Burgess, Indianapolis. Beautiful.
 Panel in oil, G. R. Stewart, Indianapolis. Meritorious.
 Scrap fruit picture, Julia S. Richardson, Indianapolis. Ingenious.
 The galvanic spinal corset, Miss A. Woodard, Chicago, Ill. This

corset was invented by the exhibitor, and is a corset and spinal brace combined, with galvanic bands.

Painting in oil, water colors and crayon, Miss Helen M. Bruce, Indianapolis. A fine display.

Zephyr work and hair work, Mrs. G. A. Danley, Indianapolis. Good work.

Crochet cap, collar and lace, Belle Bone, age 13 years, Indianapolis. Very nice work.

Paper flowers, Belle Bone, Indianapolis. Beautiful.

Knit bolster and pillow shams, Maggie Nutz, Indianapolis. Painsstaking work.

French embroidery, two collars, Mrs. M. Posz, Shelbyville. Fine work.

Embroidery on cotton stockings, Miss Katie Hay, Indianapolis. Very good.

Oil painting, R. E. Sellick, Indianapolis. Creditable.

Statuary, Mrs. C. B. Kirtland, Chicago, Ill. A statuette and a bust of Oliver P. Morton. Both pieces were pronounced good likenesses of the Senator and indicated considerable artistic talent.

Paper flowers and three pastille paintings, Miss Katie Washington, Indianapolis. All meritorious.

Brackets in putty work, Mrs. LaPage, Indianapolis. Quite ingenious.

Oil painting, Mrs. T. A. Gillet, Indianapolis. Creditable.

Adjustable curtain fixture, Miss Alice Cosand, Russiaville. A practical invention of much merit. Diploma.

Agricultural wreath, Mrs. E. A. Lemon, Indianapolis. Ingenious

Hair flowers, Mrs. Hazzard, Edinburg. Good work.

Work box, Zula Wilson, age 12, Indianapolis. A useful article, very neatly made.

Paper flowers, Winnie Willard, age 12. Very nice.

Hair jewelry, Miss Sue Ewing, New Home, Missouri. Fine work.

Display paper flowers, Miss Lydia Hale, Indianapolis. Perfect imitations of nature in form and color.

Collection of Spanish embroidery, Mrs. Grubbs, Indianapolis. A handsome collection, old, rare and valuable.

Lung remedy and liver pills, Mrs. E. Rohrer, Indianapolis. A display of medicine invented and manufactured by the exhibitor.

Corsets, Mrs. J. H. Gehb, Indianapolis. A fine display by a woman in business.

SPECIAL PREMIUMS,

Offered by business men and firms, and awarded at the annual State Fair, commencing September 27, 1880, under the usual rules and regulations:

WOMAN'S DEPARTMENT.

Schrader & Co., queensware, birds, etc., Nos. 72 and 74, East Washington street; painting on china, Sue M. Ketcham, Indianapolis, chamber set, worth,	\$10
Hoosier Shoe Store, No. 2 W. Washington street; hand-made shirt, by a young lady under 20 years of age, Lue Homer, Knightstown, 1 pair French kid shoes, worth	5
Cathcart & Cleland, booksellers and stationers, No. 26 East Washington street; collections of pressed ferns, Mrs. Allen Lloyd, Indianapolis, jewel case, worth	10
Charles Mayer, toys, notions and fancy goods, No. 29 West Washington street; calico dress, made by a girl under 20 years of age, Ella Swift, Bentonville, Fayette county,	5
Bates House Shoe Store; knit stockings or socks, Mrs. G. W. Dunning, Marion, Grant county, one pair custom-made shoes, worth	5
L. W. Moses, optician, spectacles, No. 50 East Washington street; quilt made by oldest lady since January, 1879, Mrs. Mary Mason, Lawrence, Marion county, 1 pair gold spectacles, valued at	10

BUTTER, BREAD, ETC.

Bowen & Stewart, booksellers and stationers, No. 18 West Washington street; 5 pounds home-made butter, Mrs. Geo. Jackson, Indianapolis, one volume of the "Centenary" or History of First 100 Years of our Country, valued at	10
Henry Craft, of Craft & Co., jewelers, No. 24 East Washington street; 1 gallon jar mixed pickles, home-made, Mrs. J. E. Howe, Muncie, silver pickle dish,	12
New York Store, dry goods, millinery, etc., Nos. 25 to 31 East Washington street; collection brown bread, home-made, Mrs. Lottie Spicer, Shelbyville,	5

J. C. Shoemaker, Sentinel office, collection of bread, rusks and rolls, home-made, Mrs. W. M. Voorhis, Lawrence, work-box, worth	\$5
James Dryer, grocer, 100 N. Illinois street, brown bread, home-made, Mrs. G. A. Danley, Indianapolis, 20 lbs. old Java coffee	
Jacob Voegtle, stoves and tinware, 85 E. Washington street, home-made yeast bread, made by a young lady under 18 years of age, Nellie Brown, Indianapolis, a coffee machine worth	2

CHILDREN'S DEPARTMENT.

A. L. Wright & Co., carpet house, 47 and 49 S. Meridian street; specimen of silk embroidery on cloth, by a girl under 15 years of age, Lavina Morehead, Muncie,	\$5
Merrill, Hubbard & Co., booksellers and stationers, 5 E. Washington street; best one hundred figures made by a boy or girl from 12 to 16 years of age, Julia Cobb, Indianapolis, six volumes Bancroft's History of the United States, worth	13.50
J. A. McKenzie, clothing, 38 W. Washington street; for best business letter, written to J. A. McKenzie, written by a boy under 16 years of age, Sammy A. Townsend, Indianapolis, suit of clothes, worth	10
"When Clothing" store, 34 to 42 N. Pennsylvania street; to a boy under 14 years of age, for sawing stove wood, fastest and best, one hour contest, on Fair Grounds, 3 or more to compete, Charlie Brown, Indianapolis, suit of clothes, worth	10
Mrs. Dietrich & Walker, millinery and fancy goods, 10 E. Washington street; patching on pants, by girl under 14 years of age, Nellie Brown, Indianapolis, hat, worth	5
Johnson Bros., stove dealers and tinware goods, 62 E. Washington street; darning on stockings, by a girl under 14 years of age, Winnie Wiles, Indianapolis, chamber set, worth	7
H. Leiber & Co., art emporium, 82 E. Washington street; pastille painting, by a girl under 14 years of age, Bessie Hendricks, Indianapolis, picture, worth	5

Stout & Co., hats, caps and furs, 76 E. Washington street; drawing by boy 14 under years of age, Chas. Thurber, hat, worth	\$3
William Roll, carpet house, 30 to 34 South Illinois street; for best piano solo by a girl under 15 years of age, Mamie Stowell, Indianapolis, hearth rug, worth	3
Davis & Cole, dry goods, Odd Fellows' Block; penmanship by a girl under 14 years of age, Mamie Stowell, Indianapolis, silk fan, worth	2

A LIBERAL OFFER.

A. L. Wright & Co., carpet house, Indianapolis, donated a glass case covering for model of the Morton Monument to be on exhibition at the State Fair; also offered the following premiums, in gold, in the Ladies' Department:

Boquet of cut flowers, Miss Mattie Stewart, Indianapolis, . .	\$5
Collection of painting on silk, china and wood, Miss Sue Ketch- am, Indianapolis,	5
Butter, 5 pounds, Mary L. Marvel, Royalton, Boone county, . .	5
Drawing, by boy or girl in Indianapolis Public Schools, Miss Amy Wetz, Indianapolis,	5
Collection of jellies, by girl under 15 years of age, Susie M. Da- vis, Indianapolis,	5

GEOLOGY, NATURAL HISTORY, ETC.

PROF. JOHN COLLETT, Superintendent.

CLASS XLVI.

General collection of fossils, Dr. Jas. Knapp, Louisville, Ky., . .	\$5
Second premium, G. K. Greene, New Albany,	2
General collection of minerals, G. K. Greene, New Albany, Diploma	
Collection of mound builders' relics, R. S. Robinson, Ft. Wayne, .	5
Collection mounted birds and animals, Mrs. M. M. Duncan, Westville,	10
Second premium, John E. Beasley, Lebanon,	5
Collection, diurnal lepidoptera, Ralph Perry, Indianapolis, . .	3
Second premium, W. J. Chambers, Kent, Jefferson Co., . .	2

Collection nocturnal lepidoptera, Ralph Perry, Indianapolis, .	\$3
Collection of insects, Purdue University, Lafayette, . . .	3
Second premium, Wm. J. Chambers, Kent,	2
Collection of botanical specimens, S. J. Taylor, Indianapolis,	Diploma.
Collection of coins and medals, Louis Woerner, Indianapolis,	Diploma
Collection of living birds, Mrs. Jennie Howard, Anderson, .	10

COMMITTEE—A. W. Brayton, Indianapolis, Ind.; G. K. Greene, New Albany, Ind.

CLASS XLVII.

Block coal, Cobb & Branham, Indianapolis,	Diploma.
Caking coal, A. B. Meyer, Indianapolis,	Diploma.
Cannel coal, Cobb & Branham, Indianapolis,	Diploma.
Coke, Cobb & Branham, Indianapolis,	Diploma.
Flag stone, I. D. & S. R. R., Indianapolis,	Diploma.
Collection and variety of coal from any one county in Indiana, Cobb & Branham, Indianapolis,	\$5

COMMITTEE—A. W. Brayton, John Hurty, Geo. Lupton.

REPORT
OF THE
FIRST DIVISION OF THE
Committee on the Special Merits
OF
UNPREMIUMED ARTICLES,
EXHIBITED AT THE STATE FAIR—1880,
EMBRACING SECTIONS "A" AND "B."

STATIONARY ENGINES.

The Atlas Engine Works of Indianapolis, Ind., exhibited a Corliss Automatic Engine, the cylinder having 12 inches bore by 36 inches stroke, and estimated at 50-horse power. Steam is admitted directly from the boiler to the cylinder without obstruction. The governor is driven by ridget gear from the main shaft. Both eccentrics are operated by the governor-shaft, to work the induction and exhaust valves, so as to cut off the steam automatically. The engine is of the most modern design and of excellent workmanship. We consider it one of the best cut-off engines used at the present time. The same firm had also on exhibition one stationary engine, 12 inches bore by 20 inches stroke; one stationary engine, 8 inches bore by 14 inches stroke; and one stationary engine, 8 inches bore by 12 inches stroke, all of modern design and excellent finish and workmanship.

Dickson & Co., Indianapolis, Ind., exhibited one 1-horse power stationary engine, with locomotive slide and cross-head and direct valve motion. The same is neatly finished.

Clayton Potts, Indianapolis, Ind., exhibited one 2-horse power stationary engine of modern design and very high finish. Also an upright boiler, 24 inches diameter and 60 inches high, it has eighteen 2½-inch flues, with steam feed pumps attached. The exhibitor is an apprentice, only 18 years of age and has all the work done on it by foot-power.

PORTABLE, THRESHING AND TRACTION ENGINES.

J. I. Case, Treshing Machine Co., Racine, Wis., had on exhibition one traction engine with wrought iron driving wheels of 5 feet diameter and 8 inches face. Square gear traction with self-steering arrangement. It has a reversible link motion, together with an independent steam pump. It travels from four to six miles per hour and weighs 7,000 pounds.

Atlas Engine Works, Indianapolis, Ind., exhibited one traction engine. It has a reversible link motion and differential gearing. It runs forward and backward and turns with ease in any direction, and can be furnished with self-steering attachment. It has sufficient power to draw water-tank and separator upon any hill. The driving wheels are 48 inches diameter and 12 inches face. The engine is simple in construction, durable and easily handled. Also one 10-horse power threshing traction engine, wheels of wrought iron, 48 inches diameter and 6 inches face. The engine is propelled by chain. One 10-horse power traction engine, driving wheels 48 inches diameter and 8 inches face. Also one 10-horse power portable engine. This engine is placed on top of boiler, with center crank. It is very simple and durable. The boiler is cased in with wrought iron and lined inside with fire brick, which makes it a complete furnace and adaptable for plantation purposes. They also exhibited two square portable engines of 12-horse power each, which were operating the shafting in power hall and running a lot of tile mills. The construction and workmanship are the same as the 10-horse power portable. Also a 10-horse power square engine like above, and one 10-horse power portable threshing engine with steam feed-pump attached and of excellent workmanship.

M. & J. Rumly, Laporte, Ind., exhibited one 8-horse power portable threshing engine, with locomotive slide and crosshead. The main shaft is of Swedish iron. It has a spark arrester, which is of a very superior construction. The engine is plain and durable, and in every respect fitted up in a workmanlike manner. They also exhibited one 8-horse power portable threshing engine, with wrought and cast iron wheels.

Nichols, Shepard & Co., Battle Creek, Michigan, exhibited one 10-horse power portable threshing engine, with locomotive slide, gun metal boxes without Babbit metal, steel connection rod and main shaft. The force pump is of superior workmanship and construction. The boiler is at top, and throat sheet double riveted, also the shell. The fire box is thirty-six inches long. The same firm exhibited also one traction engine, which is driven by compound spur gear. The driving wheels are forty-eight inches in diameter and eight inches face. It is of the same manufacture as the above mentioned engine. The fire box is thirty-six inches long, twenty-two inches wide and thirty-four inches high. The size of waist is twenty-seven inches. The boiler has double wrought iron doors. It has thirty-five flues of two-inch diameter and sixty-six inches long. The flue sheet is of double thickness and copper ferruled. It has a superior hot water feed pump.

Eagle Machine Works, Indianapolis, Ind., exhibited one 10-horse power traction threshing engine. The driving wheels are 5 feet in diameter by 6 inches face, and are driven by compound bevel and spur gearing. It has locomotive slide and cross-head. Also, one 12-horse power portable engine for pony saw-mill purposes.

Chandler & Taylor, Phoenix Foundry, Indianapolis, Ind., exhibited one 10-horse power portable engine. The bed-plate is of modern design. The valve is moved direct from the main shaft. The heater is placed in front part, under the waist of the boiler, and is easy of access. It has also a super-heater in the back part of the smoke-box. The engine is durable and simple in its construction.

Scioto Machine Works, Circleville, Ohio, exhibited, by A. B. Dumm, one 10-horse power portable threshing engine, which was operating a plantation saw-mill. The fire-box is of open grate surface, and the boiler of superior workmanship. The length of the boiler over all is 9 feet; diameter of shell, 2 feet 4 inches; length of fire-box, 2 feet 4 inches; width of fire-box, 2 feet; height of fire-box, 2 feet 1 inch; 26x2½ inch boiler tubes, 5 feet long; square feet of heating surface, 91½ feet; 7 by 12 inches cylinder, erected on a cast-iron semi-cylindrical bed-plate, having four lateral attachments to the boiler. The feed-water is lifted by the pump attached to the cylinder and driven from the cross-head and forced through a suitably arranged pipe, which passes through the bed-plate to the check valve, and thence into the boiler. The exhaust steam passes from the cylinder into the bed-plate and out into the smoke chimney, heating the feed-water before it is forced into the boiler, as well as also answering the double purpose of extinguishing the sparks of fire as they enter the smoke-box. The pillar block is on the rear

end of bed-plate. The driving shaft passes over the top of the boiler, just in front of the smoke chimney. The cylinder head, pumps and check valve joints are made metal to metal, ground steam tight. It has steel piston and pump rods. All bearings worn in brass or Babbit metal.

E. M. Burdsall & Co., Penn Yan, N. Y., exhibited one 10-horse power portable threshing engine. It has a camel-back boiler, whose side seams are double riveted, and has a steam super-heater.

C. Krantz, Evansville, Ind., exhibited one 10-horse power, upright, portable threshing engine, made after the Latta steam fire engine style. The engine needs no staking down and stands perfectly solid. The engine is attached to the boiler in a vertical way. Below the grate-bar is a regulating damper to shut off or increase the draft of the boiler at will.

Robinson Machine Works, Richmond, Ind., exhibited one 8-horse power, portable threshing engine, with locomotive slide and cross-head. The engine is substantially built and of simple construction. The boiler is of good workmanship, with large dome, affording ample dry steam for the engine.

Gaar, Scott & Co., Richmond, Ind., exhibited one 10-horse power threshing, traction engine, with locomotive slide and cross-head. The driving-wheels are 5 feet in diameter and 6 inches face, and made of cast and wrought iron. They are driven by bevel and straight compound gearing, the "Judson" governor being used. Both engine and boiler are of superior workmanship. They also exhibited, by James V. Moulton, one 6-horse power portable farm engine, which gave motion to a lot of farming machinery at the Weir Plow Company's hall. It is a plain and serviceable engine.

C. Aultman & Co., Canton, Ohio, exhibited one 10-horse power, traction threshing engine, the driving-wheels being of wrought iron, 48 inches diameter and 8 inches face. It has a compound spur and bevel gearing, with friction wheel, handled by a screw and hand-wheel, and can be stopped at once in case of any danger. The engine is driven by chain instead of ridget gearing. It is very strong, of modern design, and the "Pickering" governor is used. It has an upright boiler, mounted on iron axles and supported with springs.

Huber Manufacturing Co., Marion, Ohio, exhibited one 10-horse power portable threshing engine. The wheels are of wrought and cast iron. It is a vertical engine of a new design. It has a round fire-box with returned flues on top. The feed water is heated by a space on the end of the smoke head.

Harrison Machine Works, Belleville, Illinois, exhibited one 10-horse power portable threshing engine. It has wrought and cast iron wheels. The connecting rod is made of steel, and the cross-head can be easily adjusted. The boiler is of circulating bottom.

Hoover & Sons, Hamilton, Ohio, exhibited one 12-horse power portable engine. It can be adapted for general use in farming. The wheels are of wrought and cast iron. It has locomotive slide and cross-head. It is of simple construction and good workmanship. Waters' governor is used. The boiler is of circulating bottom and has a cast-iron front.

Russell & Co., Massillon, Ohio, exhibited one 10-horse power threshing traction engine. The main feature of this engine is its very simple and durable arrangement of reversing the same, as there is no link of any kind used. The driver has full control from his seat in starting or reversing the engine. The wheels are 54 inches in diameter and 6 inches face. It has locomotive slide and cross-head. It is driven by differential gearing, and is of superior workmanship and finish.

Sinker, Davis & Co., Western Machine Works, Indianapolis, Ind., exhibited one 10-horse power portable engine, which was operating all the shafting in Reaper Hall. It gave motion to fourteen self-binding reapers in operation. The engine is of modern design and simple in its construction. It has locomotive slide and cross-head. The boiler is camel-back, which affords a greater number of flues to increase the heating surface. It has a square fire-box and open grate surface.

I. H. Thomas & Sons, Springfield, Ohio, exhibited one 8-horse power portable farm engine, with locomotive slide and cross-head. The slide is of steel and the connecting rod without straps or bolts. The engine is of modern design and excellent workmanship.

Steam Engine Company, Watertown, N. Y., exhibited by *A. C. Hamilton Indianapolis Ind.*, one 10-horse power portable threshing engine, mounted on top of boiler, with cast steel center crank; the driving pullies are attached on both sides of the machine, so as to regulate the front speed of the separator. It is mounted with a variable American cut-off governor. It has locomotive slide and cross-head. The engine is of modern construction, strong and durable. The boiler is of excellent workmanship, and has two flues. They also exhibited an 8-horse power engine of the same pattern.

STEAM PUMP.

R. R. Rouse, *Indianapolis, Ind.*, exhibited one Niagara steam pump, with a 5 inch steam and a 3½ inch water cylinder, which was pumping water out of a 4 inch driven well, supplying therewith 20 traction and farm engines. He also had on exhibition one of his driven well points. The point is constructed in such a manner as to prevent gravel or quick sand to be raised by the pump. The inner part of the point is of malleable iron, and well perforated; the outer circumference is lined with fine brass wire gauze, outside of this, is a brass tube, well perforated, so as to prevent tearing the gauze by driving it down into the ground. He also exhibited an upright boiler and steam engine, on cast iron base, to drive the steam pump. The engine is very simple and durable.

The Orvis Smoke Consuming and Fuel Saving Company, Cleveland, Ohio, exhibited by John N. Roy, one smoke consumer. The theory of this smoke consumer is, that by a proper combination of steam and air being admitted to the furnace, combustion will be so aided as to consume all of those properties which now escape in the form of smoke. The device consists of a half-inch pipe leading from the dome of a boiler and passing down at the right of the boiler front, then across, just over the furnace doors. From this transverse pipe, three perpendicular pipes of the same size extend down the front of the furnace, each connecting with a brass globe containing an air chamber; connected with this air chamber are three larger pipes, extending down and open below, which serve to draw the air from the outside into this chamber, where, commingled with the steam, they are forced through other pipes into the furnace and over the surface of the coal; this impouring current of air furnishes a much larger amount of oxygen to aid in the combustion. The steam being taken from the dome, is the driest and hottest, and the quantity used is regulated by a thumb screw in the down pipe from the dome. To still further aid in combustion, an auxiliary air draft is cast in each furnace door, by which a current of air may be directed through a series of conically shaped tubes and pipes into the furnace and over the fire at any desired angle, or, if preferable, be wholly cut off. This direct draft acts as a blower. This improvement in furnace doors is, perhaps, the most valuable that has been recently made. This principle of surface draft makes a more brilliant fire and intensified heat; it creates perfect combustion, instead of allowing any of the heating qualities of the coal to escape in unconsumed gas or smoke.

WIND ENGINES.

May Bros., Galesburg, Ill., exhibited one wind engine of simple construction. The pumping being worked directly by the wheel-shaft. The engine is under perfect control of a weight, which can be very easily increased or diminished. Its principle features are simplicity and durability.

The Iron Turbine Wind Engine, Manufactured by Mast, Fos & Co., Springfield, Ohio, exhibited a turbine wind engine, which is constructed entirely of iron. The wheel and vanes being made of No. 24 sheet iron, well bound and braced with wrought bar iron and so well put together that it is impossible for the wind to tear it in pieces or injure it in any way. The wheel being constructed on the turbine principle causes it to give more power than any other wheel of the same diameter, and as there is no wood about it to swell, shrink, rattle and be torn to pieces by the wind, it is much more durable. It weighs no more than the ordinary wood wheel.

Stover's Improved Wind Engine, Manufactured by B. S. Williams & Co., Kalamazoo, Mich., had on exhibition one wind engine of simple construction and being strong and durable. The whole engine is resting on a pedestal which is provided with chilled cast-iron balls, so as to obviate all friction which would be sustained otherwise. The vane is provided with a lever, which, when thrown out of gear, causes a spring clutch to act on the crank-wheel of the pump, and thereby stops its motion instantly.

Iron Duke Wind Mill, Manufactured by O. S. Gilbert & Co, Indianapolis, Ind., exhibited one wind engine, which is entirely constructed of wrought and cast iron. The wheel is so constructed as to give the greatest amount of wind surface and consequently more power. The pump is worked by a crank and walking beam, which enables the operator to lengthen or shorten the stroke of the pump. The vane is so adjusted that when closed up a rubber ball with spring will bear solid on a rim of the wheel, which will stop its movement.

Defiance Wind Engine, Manufactured by H. A. Bowman & Co., Indianapolis, Ind., exhibited one wind engine. The deflector of this engine is perfectly automatic. It is regulated by a varying resistance weight. The wheel is solid; it has not a joint or loose section, the rudder being in an exact right angle line back from the wheel, the wind, as it passes, strikes both sides of the rudder with even force, and thus steers the wheel steadily against the wind. The engine is simple and durable.

Perkins' Self-regulating Wind Engine, Mishawaka, Ind., exhibited one wind engine. It has only two points of friction; one is the main shaft on which the wheel is fastened, and the other the crank. All the boxes are in two parts, so as to be adjusted as they wear, and are well babbited. There is a box on each side of the pitman. The wheel sits on one side of the turn-table, so when the wind is too hard it will control the motion, and even stop in a gale. It has also a rotary attachment, for running small machinery, as grindstones, corn-shellers, etc.

Improved U. S. Star Wind Mill, Manufactured by O. G. Stowell & Co., Delaware, Wis., exhibited one wind engine, the main feature of which is that it is perfectly safe-governing. It has a friction brake on the wheel, which prevents it from running when out of wind, in order to keep the pump from freezing. The same firm exhibited also a single acting force pump with solid cast plunger, with three recesses, so if the leather should be worn out, will not stop the pump from drawing water.

The Eclipse Wind Mill, Manufactured at Beloit, Wis., and Exhibited by Fairbanks & Co., Indianapolis, Ind. The working parts of this engine are of wrought and malleable iron, and therefore makes it strong and durable. The firm has the only right to use the side vane for the purpose to regulate it.

The Buckeye Wind Engine, Manufactured at Springfield, Ohio, and Exhibited by Merrifield, Indianapolis, Ind., one wind engine made entirely of iron, and its main features are simplicity and durability. They also exhibited a double-acting force pump with porcelain-lined cylinder, without packing or stuffing box.

Croft's Improved Iron Wind Engine, Manufactured by E. C. Leffel, Springfield, Ohio, had on exhibition one wind engine which is made on the turn-table plan. The wheel is balanced on the lower end of the arm, which gets down into a sleeve. The arm and box are both chilled and several washers, which are case-hardened, are put in the bottom of the box to overcome friction. The turn-table is provided with four friction wheels to take the side weight to avoid friction. The rubber springs will take off the jar in stormy weather. A wire is running down to the ground for any one who should be present, even if it was a child, to stop it. The pitman is made of hickory wood; this makes it more sightly, and once saturated with oil will not heat as quick as metal boxes. The wheel shaft runs in a long, babbited box sixteen inches long. When properly oiled it will last a long time.

Eureka Wind Mill Company, Indianapolis, Ind., exhibited one of their celebrated wind engines. Its construction is simple, having only three wearing joints. It has a small turn-table and is therefore more easily adjusted to the wind and less apt to get out of order by storms. It moves steady and without noise. It can be set to run slow or fast, and by pulling a check cord the wheel is turned edgewise to the wind and the motion is entirely stopped. It will run any pump and can be arranged to stop after pumping a certain amount of water, or can attach a return pipe to conduct the surplus water back to the well.

SAW MILLS.

Scioto Machine Works, Circleville, Ohio, Exhibited by A. B. Dumm, one circular plantation saw mill. The peculiarities of this mill are: it has a friction feed under perfect control of the sawyer; also, simultaneous and independent lever set head blocks, which are operated by the sawyer. The carriage runs on truck axles running across the carriage, with nine inch wheels, on which the carriage moves forward and backward. There is also connected with the mill, a sawdust carrier, of ingenious and complete workmanship, and does its work in the most satisfactory manner. One of the advantages of this mill is, lightness combined with strength. The saw, mandril and feed shafts work in pivoted boxes, swung in iron housings. The mill is operated by three men. It was admired by the vast number of visitors, without exception.

Eagle Machine Works Indianapolis, Ind., exhibited one pony circular saw mill, of superior workmanship. It is built strong and neat; has a large cast iron bearing outside of the frame to sustain the stress of the belt. It is operated by friction feed. The carriage is well proportioned to suit the balance of the machinery. The head blocks are the "Miner" patent. It is considered by all who use it, a good block. The mill is operated by three men.

Sinker, Davis & Co., Western Machine Works, Indianapolis, Ind., had on exhibition a pony saw mill, with Sinker, Davis & Co.'s patent lever set head blocks. It is modern in design, of good workmanship and finish. The frame and carriage are well put together, made strong and durable. It will cut, with the aid of four men to operate it, from four to five thousand feet in ten hours.

Chandler & Taylor, Phoenix Machine Works, Indianapolis, Ind., exhibited one mulay saw mill. Its frame is made entirely of cast iron. The machinery, as crank shaft, feed shaft, etc., are neatly fitted and worked in pivoted boxes. Under the carriage, are wrought iron

shafts, on which are fitted seven and a half inches truck wheels on which moves the carriage forward and backward. The head blocks are well proportioned, and the attachment, which will bring the knees up to the saw, are of lever ratchet set. The reverse rod has a cast iron stand, with notches in it, in which is worked a pawls, so as to prevent the feed rig from being operated. So it can not be started or stopped without the sawyer is present.

SAW-MILL HEAD BLOCKS.

Arnold's Improved Patent Head Block with Automatic Dog, Manufactured by the Atlas Engine Works. Exhibited by A. B. Arnold, Patentee. One set of saw-mill head blocks, with friction clutch and automatic dog. The back of the knee is made segment-like with cogs. A pinion, which is operated by the lever, works the dog up and down, so as to adjust it to any size of log.

Kerrick & Co, Indianapolis, Ind, exhibited a set of improved simultaneous, compound lever-set head blocks for saw mills, of which Gustavus H. Zschech is the inventor. The main claims to advantage in these head blocks are the construction of the feed movement. It is very simple and accurate. There being no pawls, springs or clicks to handle, all that is required to adjust is a wedge used to disengage the set movement, in order to bring the knees back quickly to get ready for another log. They are accurate to any required thickness and very rigid. The knees are set up by a lever and screw of one inch and nine-sixteenths in diameter, and one and a half inch pitch. The head blocks take in fifty-one inches between saw and knee, a very important consideration in sawing large logs. The set rod, which brings the knees up to the saw, is of two inches diameter, being made extra heavy in order to avoid the effect of torsion in handling long and heavy logs. The screws work through five inches long gun-metal sleeve boxes, chilled on steel mandril. On the back of box is cast a round boss, two and one-half inches in diameter, and nicely twined to fit the recess in knee, and one bolt to hold it in place; this avoids the breaking of bolts if a heavy log should roll quickly against the knee. The head blocks are adjustable to any width of carriage, and, if desired, the sawyer can ride on the carriage in order to save time in getting ready for another cut. The work is done very accurately, all the parts are made interchangeable and well finished.

THRESHERS AND SEPARATORS.

Harrison Machine Works, Belleville, Ill., exhibited one thresher and separator of vibrating pattern. The principal points are the pick-

ers or its top separation. The extreme width and length, diverging in width from the cylinder back, gives it a large separating capacity. The fan-mill is of unusual size and width, giving all the blast necessary to do good cleaning; also the patent cross frame, in front, under the separator, enables the driver to turn short without locking the wheels.

J. C. Hoover, Manufacturer of Monarch Engines and Threshers, Hamilton, Ohio, exhibited one thresher of the vibrator pattern. It has a wind deflector in front of the riddle, so as to change the wind at will, to suit all kinds of grain. It has an endless chain in back of the vibrating floor, so if any grain should be lodged in the straw to bring it back on the bottom of the chain on a tight floor into the tailing spout. It also has a beater placed in the rear end of the cylinder to keep the wheat from flying forward and evenly divide the straw on the vibrating floor. It has an end shake shoe, which is moved quickly back and forward, so as to separate the wheat from the chaff in a most complete way. The riddle is peculiarly adapted for the operating of that kind of a shoe, which insures perfect cleaning.

Russell & Co., Massillon, Ohio, exhibited on thrasher and separator with canvas apron, "Pitts" patent, with under and over shot blast. It is of very fine finish and workmanship; also one thrasher and separator. It has all the gearing inside of the main frame, except on the conveyor and the fan. They use cast arches in front of the frame in order to pass the front wheels under the thrasher, so as to make a short and quick turn. One good feature is a shaft placed on top of the vibrating frame, which has a series of picking fingers to agitate and lift the straw from the vibrating floor in its forward movement. It has also a beater placed in rear of cylinder, to knock and loosen the grain from the heads. The machine is of superior workmanship and finish.

The Huber Manufacturing Company, Marion, Ohio, exhibited one thrasher and separator. Its cylinder is supported in an independent frame and so arranged as to take in grain freely without dusting the feeder or choking the cylinder; the concave is supplemented by a series of open grain grates, which extend from the concave to the beater and which assists in the process of separation. The beater is one of the features of this machine; it runs in an opposite direction to the cylinder and at a different rate of speed, so that all straw and grain is arrested at this point and the separation begun. The beater, by the blow which it gives the straw on the under side, delivers the grain on the angles of the blades of beater, being always kept under the straw and thrown down to the shoe and

vibrating separator. The chaffing devise is another feature. In construction it is a slatted frame, extending from the vibrating shoe to near the back of the riddles and receives the chaff, straw and littering that comes from the carriers, and by its vibrating motion distributes the grain evenly over the riddles and works the chaff and straw over to the stacker. The fan-mill has an over-blast fan, provided with patent blast regulators. The elevator carries the headings up a gradual incline and empties directly into the cylinder. The wagon is so arranged as to turn the front trucks around under the separator.

Eagle Machine Works, Indianapolis, Ind., exhibited one oscillating separator. The principal feature is its simplicity in construction. The straw is carried forward by four oscillating slatted floors. The straw is agitated by two sets of rakes to shake and separate the grain from the straw as it passes along on top of the slatted oscillating floors. The machine has a very large riddle surface to give the grain ample time to separate itself from the chaff.

The Robinson Machine Works, Richmond, Ind., exhibited one thresher and separator. It has a large separating surface on the vibrating floor. The straw is agitated and brought forward by three rakes, which are suspended above the vibrating floor. The rakes are operated by two crank shafts of from eighteen to twenty inches throw. The extension of the grain floor is a continuous rake-like open floor, made out of straight wires, so as to prevent the coarse straw and chaff from going on the riddles. It also has a vibrating floor on the end of straw stacker, which is to carry back all grain which might be drawn over by the fan.

The Combination Grain Separator, Manufactured by Upton Manufacturing Company, Battle Creek, Mich., exhibited one thresher and separator. The vibrator carries the straw in bunches. By the aid of one picker and open slot-rattling chain it is carried in an evenly distributed screen. The machine is very simple in construction. Something novel in this machine is a combined cylinder shield and comb, which prevents all back lashing and wrapping of straw round the cylinder. The stacker is easily adjusted and folded over the top of the machine while moving. With the appliance of a long elevator it empties the chaffing and grain without shake spout in front of the feed board.

C. Aultman & Co., Canton, Ohio, had on exhibition one thresher and separator. The peculiarity of this machine is by having a short, open slot-chain to carry off the straw immediately after it goes through the cylinder. Above the chain are two feeders to agi-

tate the straw so the grain will drop on to the chain. After the straw leaves the chain it is carried along on three beaters, which will shake up the straw and distribute it evenly on the vibrating floor. The vibrating floor is of upward and downward movement. It has a very large riddle surface. The shoe is extended quite a piece on the straw stacker, with a solid floor, which opens towards the tailing spout, which prevents grain from being carried on to the straw stacker. The tailing spout has this peculiarity, that a part of the floor is perforated, so as to admit grain which is already free from chaff and heads to fall through back of the cylinder, so that it will not be broken or picked by the force of the cylinder teeth. It is a smooth and easy running machine.

Gaar, Scott & Co., Richmond, Ind., exhibited one thresher and separator. The frame of this machine is built in a very substantial manner, and is so constructed that the front wheels will turn readily beneath the sills. The whole machine widens out from the cylinder back to the rear end. This provides for the safe and easy passage of the straw, and admits a much wider shoe and riddles. A peculiar feature of this thresher consists in placing immediately behind the cylinder, a rotary deflector or beater, which receives the dash of the grain from the cylinder and turns it downward on to the separating pan, and prevents the grain from being thrown, by the force of the cylinder, forward into the straw. This beater adds greatly to a perfect separation of the grain from the straw. Another feature, is the elevator, which is so constructed that the tailings are discharged into the cylinder through a short stationary spout. Another advantage, is its manner of attaching and transporting the straw stacker. They use a folding stacker, raised and lowered by rope and windlass, with wind protector and side canvas. The two sections of the stacker are connected together by pivot hinges. When extended for use, the stacker is held in position by the ropes, and when folded for moving, the rear section is folded back and rests on the top of the thresher. With one man at the windlass, the stacker can be raised or lowered,

Birasell Manufacturing Company, South Bend, Ind., exhibited one separator and thresher called "Monitor Junior." This machine is threshing the clover from the straw. The bolts separate the straw from the chaff and seed. After falling through the bolts it is caught by the vibrating table, which is directly under the bolts, and carried back by the rising and falling of the table to the hulling cylinder and its concave, and is hulled by said cylinder and carried by a belt to the fanning mill, where the chaff is separated from the

seed, and tailings from the mill are carried, by an elevator, back to be rehulled and fanned.

Seymour, Sabin & Co., Stillwater, Minn., exhibited by Tyner & Hadley, Indianapolis, Ind., one vibrating thresher and separator, which is called "Minnesota Chief." One main point of this thresher is that it regulates the grate back of concave at will, so as to prevent the cracking of grain. This grate being an open one, it affords to separate the wheat from the straw immediately after leaving the concave. The straw is agitated by a slack apron in an up and forward motion. The wind of the fan is easily adjusted by a wind-divider, which causes the wind to be brought to bear up or down the riddle. A countershaft is placed in front of the feed board, carrying the under side of the main belt from the engine, thereby giving a slow motion to the belt to balance the machine from allowing the cylinder to run free and without attachment of other belts. The entire machine is operated by four belts. The concave is raised and lowered by an effective and simple arrangement under the feed board, easier to access, and can be adjusted while the machine is in motion.

M. & J. Rumly, Laporte, Ind., exhibited one grain separator and thresher, with short canvas apron of the Pitts' pattern. The machine is made durable, and is simple in construction. It separates the grain from the straw in a most complete manner. The shaking of the shoe is variable, suiting any kind and condition of grain, with the aid of a cone shake attachment. The principle feature of this machine is, that the straw is delivered from the canvas grain carrier, to a long, endless, opened slotted chain; this causes the separation of the grain from the straw in a most perfect manner.

Chandler & Taylor, Phoenix Machine Works, Indianapolis, Ind., exhibited one thresher and separator. The fan is directly placed in front under the feed board, by which the separator is shortened to a great extent. The wind of the fan is regulated precisely the same on both sides, so that it will not admit more wind on one side than on the other. By these means, the wind is equally divided on the riddles. It can be operated from either side of the machine. The measuring of grain is quickly changed from one side to the other. On bottom of the straw chain, is a concave-like attachment. If any grain should blow over the riddles, the under part of the chain will carry it back into the elevator. There is another good feature in this machine, by replacing of the riddles to thresh either oats or wheat by opening a small door on the side of separator. The riddle is readily adjusted by a small crank shaft, so as to raise or lower

it quickly, if there should be any tendency to choking. The straw is carried forward by agitating rakes, which are worked by an eccentric shaft.

C. H. Brookbank, Connersville, Ind., exhibited an agitating thresher and separator. The main features of it are an endless chain with riveted rakes, agitating the straw loosely on the under side of its forward movement, and is also capable of an instantaneous adjustment of any degree of agitation required for any kind of grain. A deflector being placed immediately in rear of the concave it brings in an upward direction, allowing the grain and chaff to pass through said deflector to an immediate separation. Another main feature is the manner in driving the main belt on the separator, which operates all the machinery in the separation. The under side of the main driving belt passes over a large pulley, which is placed below the pulley which drives the cylinder from six to eight inches forward, in order to create sufficient friction to run all the machinery required.

J. I. Case & Co., Racine, Wis., exhibited one vibrator thresher. One principal feature in this thresher is the placing of the concave so that it admits the straw and grain down to the vibrating floor, instead of throwing it forward on the floor. This prevents the grain from being carried along with the straw. By this means a better separating of the grain is accomplished. The grain is more readily brought to the feed board, on account of its construction. There is also a feeder placed back of the cylinder, which brings at once the straw down to the vibrating floor. The vibrating floor is so arranged that the grain floor counterbalances the straw floor. The straw conveyer is so constructed as to carry the straw forward and upward to the straw stacker. This will give the grain a perfect separation from the straw. The grain conveyer is perforated over the shoe, carrying off all long obstructions on the straw stacker, instead of bringing it down to the grain riddles. The shoe is of very short and quick shake movement, which enables the chaff to be quickly separated from the grain. Another feature of this thresher is the attachment of the Eclipse elevator; no matter if the grain and chaff is dry or wet, it never chokes. It also has a greater width of separating surface in proportion to the threshing cylinder. The cylinder is 32 inches. The width of separating surface is 46 inches.

Nichols, Shepard & Co., Battle Creek, Mich., exhibited one thresher and separator called the "Vibrator." The separating portion of this machine is made in the form of a long box, decked over at the top and open at the rear end and divided into three sections. The

upper section is stationary, and forms the straw space. Below this are two movable sections or troughs, each about six inches deep, fitting into each other, the upper one having a bottom formed of transverse wooden slats, with spaces between to permit the grain to fall into the lower section. Just above this open slat-work are placed several sets of finger-bars with long, projecting fingers in each. These fingers reach from one bar to the other, nearly the entire length of the separator. To one end of each finger is attached an upright arm, the upper ends of which are connected with the stationary frame of the machinery by means of leather straps which regulate the lift, or upward throw of the fingers. The lower section has a tight floor to hold the grain after it is separated from the straw and falls through the slatted floor. It also projects under the concave and grates to receive the threshed grain which passes through them. The rear end projects partly over the sieves, and is perforated so that the grain falls through in a shower, and is evenly distributed upon the sieve. The middle and lower sections are both suspended on swing rods, and are made to vibrate or swing backward and forward by means of the crank shaft and connecting bars. These vibrating sections move in opposite directions, and thus counterbalance each other, so that the machine stands perfectly still, without blocking or bracing. The machine being in motion, the two sections are vibrated backward and forward, and communicate an uplift motion to the shaker, which works the straw gradually to the rear. The straw, as it leaves the threshing cylinder, is deflected or turned down at once to the agitating fingers by the circular deck. The first rank of fingers toss up the straw with rapid blows, and passes on to the next, where the same process is repeated, only with more of an uplift movement, and so on over the six successive ranks of agitating fingers, until the straw passes from the machine. Meantime, a large share of the grain goes through the concave and grating, and falls into the lower section without passing into the straw at all. The grain is thoroughly shaken out in its passage over the agitating fingers, and sifts through the open slat-work into the lower section, which conveys it to the fan mill. They also had on exhibition a set of concaves, with corrugated teeth inserted. The "Vibrator" thresher is easily changed from a thresher into a clover huller.

Hagerstown Agricultural Implement Manufacturing Co., Hagerstown, Maryland; Exhibited by Tyner & Hadley, Indianapolis, Ind., one clover huller called "Victor." The chief point in this huller is, that it feeds the clover under the cylinder; this threshes the seed clean off of the straw and hulls it partly; the rakers separate the heads from the straw and carries the unhulled seeds back to the

lower cylinder, which hulls all the tougher seeds without breaking any seed. The suction fan cleans the seed as it goes to the measure. The tailings are carried up by elevator to the upper cylinder.

Whiting & Shearer, Manufacturers of the Ashland Clover Hulling Machines, Ashland, Ohio, exhibited one clover huller, called the "Ashland Huller." Its upper hulling cylinder is open barred with wrought iron spikes and undershot feed; it has a low feed board, from six to fifteen inches; the low position of the cylinder prevents any danger of top heaviness; the lower hulling cylinder has a steel nailed surface, which does its work perfectly. It allows the separator to be more open, there being no danger of clogging, and prevents the seed from passing out with the straw. The cylinders are both driven by the main drive-belt, or by one gear wheel. It has an open web, with slats two inches apart, which allows all the heads to pass through and the pickers to carry the straw over, to stir it up continually, and entirely prevent bunching. The sieves are six feet long—double the entire length. The upper sieve, having offsets, possesses the double advantage of having a larger space for the wind close to the cylinder, and of shaking and turning over the chaff as it passes along the riddles. There is no need to stake or brace the machine to hold it in position. The machine can be easily changed from gear to belt and also by a simple change of pinions, the speed, or the motion reversed. It is a simple construction and durable.

American Grinding Mill Company, Chicago, Ill., exhibited by *A. C. Hamilton, Indianapolis, Ind.* This feed mill is horizontally mounted on a cast iron frame. The hopper is securely attached by a five-eighth inch iron rod to the frame. The burrs are made of chilled cast iron. It is warranted to grind eighty bushels an hour. It is of new design and simple in its construction. The inner burr is fastened with a wooden pin, which goes through the hub and shaft. If at any time any hard substance, like nails or gravel, should be fed, the wooden pin will twist off and save the burr from being cut or broke. This mill can be either operated by steam or horse power.

BRICK AND TILE MACHINES.

Tiffany's Brick and Tile Machine, Manufactured by Frey, Scheckler & Hoover, Bucyrus, Ohio, exhibited one brick and tile machine, whose main principle is that it has two shafts, one inside of the other. The main, or outside shaft, has the mixing knives and the main propeller, while the inside shaft is running in an opposite direction at six times the speed of the main shaft. By means of a smaller propeller it forces the clay through the dies for either brick or tile.

from two inches to eighteen inches diameter. By means of this opposite running shafts the clay is entirely mixed and laminations prevented. The machine is simply and strongly built. The mixing shaft running a slow speed, the machine is enabled to run with much less power than otherwise.

Chandler & Taylor, Phoenix Machine Works, Indianapolis, Ind., exhibited one drain tile machine. This machine is very simple in its construction. It is made very strong and works quickly, and is very easily operated. It only requires from two to three horse power to operate it successfully.

The Adrian Brick and Tile Machine Manufacturing Company, Exhibited by J. S. Knapp. It is a horizontal machine, with one set of gearing, which grinds, tempers and pushes the clay through the dies in a horizontal way. By the way of dies, it makes any kind of shape. It is simple, strong and cheap. The machine is very easy operated, and the dies are quickly adjusted. There is the same cut off table in use for brick or tiling.

MISCELLANEOUS.

Eagle Machine Works, Indianapolis, Ind., exhibited one improved Woodbury horse power, mounted on wheels, to avoid the handling of this power up and down from the wagon in order to operate it. It is made simple and durable.

P. E. Dederick & Co., Chicago, Ill. and Albany N. Y., exhibited one perpetual baling press, of novel construction.

Riley Bond, Indianapolis, Ind., exhibited one flour and middling purifier combined. It is a flour bolt of new design, and is so constructed as to bolt the flour from the first grind and purifies the middling the same time. The middlings then, after being reground, are bolted again on a different cloth in the same machine. He can bolt whole stock flour and two or three grades at the same time and in the same process. The same machine can be used for a grain grater or purifier. On the same principle, he can kiln dry meal or grain by the same process. The process is an oscillating motion by the bolt. It is very plain and simple in its construction.

Kerrick & Co., Indianapolis, Ind., had on exhibition the celebrated Knowles steam pumps and a lot of leather and rubber belting. Also selection of Jet pumps and a case of fine engine supplies.

Nordyke, Marmon & Co., Quaker City Iron Works, Indianapolis, Ind., exhibited various kinds of shellers, cleaners, etc. They also exhibited H. A. Barnard's warehouse wheat separator. A large selection of mill supplies, such as French mill burrs, corn mills, polished

shafting couplings, hangers, pullies of new design; also a fine lot of belting and burr casings, one diamond mill stone dressing machine, various kinds of mill stone spindle steps, S. M. Braden's wheat heater, Ligonier, Ind. This heater consists of a series of coils, which are encased in copper; the coil is heated by steam and the wheat, in passing over this heated coil, is ready for grinding. Also one fine case full of different kinds of bolting cloth and millers supplies, mill picks and elevator cups, elevator gudgeons and stands.

Sinker, Davis & Co., Western Machine Works, Indianapolis, Ind., exhibited a lot of "Bellis" governors, also stop-valves, hangers, pulleys, couplings and saw harbors, also a selection of French mill burrs, one 36-inch iron husk mill, upper runner, with French burr of new design, also a 24-inch mill, under runner, of new design; one 4-reel bolting chest on which you can get at any part of it and see the workings of the bolts. Also one new design of reel head, which is so constructed that it does not require any boxes or spouts. It delivers all the products from the outside and takes the feed from the elevator also from the outside. The products of the reel can be examined separately on the outside of the chest. Either side of the chest can be used alternately. They also have a new design of proof staff, warranted to be perfect under any atmosphere, and a grain elevator with distributing spout of new design. Also a Dolman purifier which will operate on six different grades. It has six different air passages which operate separately, so as to distribute the air as the middlings of different grades require.

John P. Wood, Indianapolis, Indiana, exhibited a flour sack machine which takes the paper from the roll, pastes it while it goes to the cutter and cuts any size desired. This is the only flour sack manufactory in the State. Also one printing press, which prints as many colors as desired at one impression, and also two stapling machines to staple the butter dishes.

J. A. Dynes, Indianapolis, Indiana, exhibited four hand printing presses of different design. Print all kinds of cards and do any kind of little job work.

Merrill's Improved Water Purifying Air Valve Chain Pump, Exhibited by Merrill, Indianapolis, Ind. It is an improvement over all the chain pumps, and is easily worked; does not get out of order and is not liable to freezing. It will purify any well or cistern water in less than one week.

Howard's Adjustable Legs for Step Ladders. This is a very ingenious device for lengthening or lowering the ladder to accommodate itself to the work to be done. It is perfectly safe by getting up to the last step on top of the ladder.

To the Honorable Members of the State Board of Agriculture of Indiana:

Your Committee on the Special Merits of Sections "A" and "B" wish to express their desire in recommending a practical test of traction engines at the coming State Fair. It can be easily accomplished, with a small outlay of money, by erecting a strong frame, from eighteen to twenty feet high, well stayed. On top of said frame would be placed four sheaves, two feet in diameter, to receive a two-inch hemp cable. A sheave of like diameter would be placed on bottom of frame. On one end of the cable will be a platform attached of sufficient size and strength to receive weights of iron or rock; on the other end of the cable should be attached a traction engine, under eighty pounds pressure by a test steam gauge, made for that purpose. At the test of each engine, the size of cylinder and number of square feet of heating surface, also number of the rated and weight of engine should be recorded by the committee in charge. This would give all men who use, or wish to use, that class of engines, a clear idea of its traction power. If this would be made known to all engine builders, a greater number of engines would be sent to our next fair, and would draw a much greater number of visitors. It would be very interesting to men who use traction or common farm engines.

We also submit to your consideration another feature of importance; that is to furnish all exhibitors of steam power, with fuel. It will be a small outlay to the State Board, but a great annoyance to users of steam power would be done away with. Most of these men are from abroad and not acquainted with any body. Your committee has aided and done all in their power to overcome the existing difficulties at this last exhibition.

Hoping the above will meet your approbation, we respectfully submit this report to your consideration.

GUSTAVUS ZECHECH,

GUSTAV BOHN,

Committee.

REPORT OF THE SECOND DIVISION
OF THE
COMMITTEE ON SPECIAL MERITS,

Upon Articles Entered in Books "C" and "D."

Your special committee having charge of books "C and D" at the State Fair of 1880, would respectfully submit the following report:

The exhibit included in the above books is especially fine. A few articles enumerated, were not found on exhibition.

In our descriptions we use the letter of the book and the number of the entry, that any errors may be traced up and corrected.

W. G. PARKER,
J. W. RAGAN,

Committee.

C. 5.

The Wonderful Churn, Exhibited by the Indiana Churn Company, in various sizes, and in practical operation, producing twelve pounds of butter in ten minutes' time, impressed your committee favorably.

C. 23.

Cornish & Curtis, of Ft. Adkinson, Wis., had on exhibition rectangular and square box churns, in sizes adapted to dairy or family use; also, the Lena and Eureka butter workers and butter color by R. S. White of the same place. This is a creditable exhibition of useful implements.

C. 13.

John Boyd, No. 199 Lake street, Chicago, exhibited the Cooley creamer. This consists in the use of a can which may be submerged in water until the cream rises, after which the milk may be drawn off. This is a useful dairy implement.

C. 7.

The Reich Patent Cylinder Churn, with perforated dasher and suction spring; also, egg beater on the same principle, were exhibited by H. T. Sinks, of Indianapolis. These are desirable implements for family use.

C. 35.

The Centennial, an Improved Lever Dash Churn, exhibited by D. R. Nevitt, LaMong, Hamilton county, Indiana, is simple and easy of operation, and we believe worthy of recommendation.

C. 1.

Mrs. C. O. Lines, city, exhibited a patent steamer attachment for cooking stoves, by which she bakes bread, potatoes, meats, and, in fact, any article without additional fuel. We regard this as a valuable acquisition to the kitchen furniture.

C. 14.

Jacob Voegtle, city, had an elegant display of stoves, perhaps never excelled at any previous State Fair. He makes a specialty of the Favorite cook stoves, manufactured by W. C. Davis & Co., Cincinnati. This display includes a full line of base-burners and heating stoves, the West Point being prominent. Your committee take the liberty of recommending a diploma of merit to this display.

C. 4.

R. L. McQuat, city, displayed a full line of heating and cook stoves; the Argand and Early Breakfast being specialties.

C. 12.

Wiggins & Donnan, 119 East Washington st., city, exhibited the Crowning Glory and a full line of base burners and heating stoves.

C. 10.

Medsker & Gouty, 64 North Illinois St., city, exhibited an assortment of stoves. The Aladdin is a specialty with them.

C. 3.

I. L. Frankem, city, had a fine collection of stoves, including the Richmond Range, Champion, Monitor, Radiant Home and Parlor Cook stove for wood. He also has the vapor gasoline cook stove, and some elegant mantles.

C. 2.

The Garland Heating and Cook Stoves were exhibited by John A. Lyons, 76 West Washington street, city.

C. 11.

The Westminster Base Burners, Ranges and Acorn Cook Stoves, were exhibited by Rand & Co., city, assisted by T. J. Bradler, of Albany, New York.

C. 8.

Priest & Clark, 85 Virginia avenue, city, exhibited in operation, the Triumph Clothes Wringer. This wringer has special merit.

C. 4.

Foos & Co., Springfield, Ohio, have a cheap and durable clothes wringer, which we can recommend.

C. 42.

R. F. Porch, of Spiceland, Indiana, showed the Humbolt Clothes Washer.

C. 6.

J. L. Gause, of Indianapolis, had in practical operation two sizes of laundry washers. This machine is easy of operation, has a rocking motion, which brings pounders into contact with the goods in such a way as to effectually perform its work without injury to the fabric. We believe this to be a good machine for laundry purposes. He also exhibited a mitre and bevel cutting machine.

C. 28.

J. W. Davis, of Marion county, exhibited the celebrated Muncie Washer. This machine is simple, cheap and easy of operation. It is used in connection with an ordinary wash tub, and performs its work by a compound pressure and rubbing motion.

C. 89.

A Desirable Flour and Meal Chest, an article adapted to every household, was exhibited by John W. Riggs, of Fortville, Ind.

C. 84.

A very beautiful Pyramidal Stand, containing beer, ale, porter and other malt liquors in variety, all nicely bottled, labeled and arranged, the whole producing a pleasing effect in the Hall, was shown by the manufacturers, William Bachus & Co., 299 West Washington street, Indianapolis.

C. 40.

D. G. Brown, of Dayton, Ohio, showed an extension step-ladder, which we regard as of special merit. It is light and strong and may be extended at will to quite double its usual length.

C. 18 to 21.

John S. Wilson, of Indianapolis, had a variety of convenient and useful fly and insect screens, adapted to doors and windows; also, a kitchen safe made of same material. We commend these articles to neat housekeepers.

C. 30.

A safe and secure Sash and Burglar Proof Lock, sure and steadfast, adapted to any window, was shown by the Yeagley Burglar Proof Sash Lock Co., of Indianapolis.

C. 16.

Sanders & Recker, 103 East Washington street, Indianapolis, made an elegant display of furniture. Their parlor, chamber and dining room sets were especially worthy of note, as also their chairs, lounges, etc., all of which were tastefully arranged, and we consider, worthy of a diploma.

C. 22.

Spiegel & Thoms, city, made a very tastefully arranged display of fine furniture. This display was made in connection with the very elegant display of carpets, wall paper and tapestry, made by Albert Gall, but which does not come under the notice of this committee, being in another book. Considering the effect and beauty of this display, and the elegance of the furniture shown, and the fact that this firm are strictly home manufacturers, we recommend a diploma of merit on this exhibition.

C. 15.

C. Schrader & Bro., 73 East Washington st., city, made a beautiful display of fine china and queensware. It is rare to meet with such good taste as was displayed in the arrangement of this exhibition, consisting of elegant table and chamber sets of fine imported ware, painted and decorated after the latest and most approved designs of art. One set of ware in this exhibit was valued at \$200.

China, Glass and Queensware, the exhibit of Mr. J. T. Kinney, No. 54 North Pennsylvania st., Indianapolis, was specially meritorious and elicited on every hand high commendation and praise. The goods were all new and unique in design and decoration, and were decorated expressly for this exhibition at a large cost, the decorations being new combinations in colors and hand painted, on new shapes which had not before appeared on the market. These goods were designed and work executed under his own supervision, on both French and American wares. As a work of art, we may safely say a finer display has never been put on exhibition in any western State, and the effect must be to elevate public taste in art work.

D. 5.

Lewis & Whitehead, city, made a fine display of monumental work, in marble and granite; also, statuary, vases, etc. They also had in their charge the model of the Morton monument, prepared for the exhibition by A. L. Wright & Co., dealers in carpets, etc. This model attracted much attention from the visitors to the fair.

D. 2.

One of the Oldest and Most Faithful Exhibitors at Indiana State Fairs, and which we again found with a large and handsome display, is the manufacturing firm of E. C. Atkins & Co., city, (firm consisting of E. C. Atkins and H. Knippenberg), who displayed a full line of saws, including the celebrated diamond tooth cross-cut, which they make a specialty of. In view of the elegance of this display, together with its intrinsic value, we would respectfully recommend that a diploma of merit be awarded for it.

D. 3.

Specimens of Machine Manufactured Brick, of good quality, from the Quaker brick machine, were exhibited by Fletcher & Thomas, city.

D. 10.

Ewald Over, Founder and Machinist, Indianapolis, exhibited a collection of farm bells, in connection with various farm implements, force pumps, power cider mills, presses, etc.

D. 4.

A collection of Horse Shoes in variety, many of them finished ready for the foot, were shown by G. A. Hardesty & Co., of Indianapolis.

D. 6.

A. B. Meyers & Co., Indianapolis, make a display of coal and coke.

D. 7.

Sedgwick Bros., Richmond Ind., exhibited wire net fencing and gates of various sizes and styles of same material.

REPORT OF THE THIRD DIVISION
OF THE
COMMITTEE ON SPECIAL MERITS,
Of Articles Entered in Books "E" and "F."

SECTION I.—PLOWS AND CULTIVATORS.

In this section, your committee found a very creditable degree of improvement, both in the style and finish of the implements. This is especially true in the departments of sulky breaking plows and cultivators, showing an advance in the direction of deeper and more thorough cultivators.

George W. Brown, Galesburg, Illinois, exhibited a sulky running gear for attaching a common walking plow at pleasure. This is a very convenient arrangement, and allows the plowman to adjust his plow to the strength of his team. The same party exhibited a two-horse cultivator, with handles adjustable to any elevation. The shovels are so attached to the bar that the bolts do not appear on the face of the shovels.

Moline Plow Company, Moline, Ill., had on exhibition a sulky plow, steel mould-board and arch, with a very convenient device for regulating the depth of cutting and setting the land slide; also, a combined cultivator, with seat and handles, adapted to either riding or walking, and a cultivator constructed for walking only. The same company showed a collection of breaking plows of various sizes, adapted to breaking sod or stubble, and constructed with wooden or steel beams, to suit the fancy of purchasers. The work on all these implements was executed in good style, highly finished and substantial.

P. P. Mast & Co., Springfield, Ohio, showed a two-horse cultivator, adapted to either riding or walking. When riding, the shovels may be controlled by the feet. The fenders on this cultivator were re-

volving disks, with deep indentations around the edge. Also, the same party exhibited a sulky running-gear to which a common walking plow may be adjusted and made to operate as a sulky. These implements were made of good material, fine workmanship and with a high finish.

South Bend Chilled Plow Company, South Bend, Indiana, exhibited a sulky plow of chilled iron highly polished. This plow has a peculiar device, by which the plow is lifted out of the ground by the force of the team, by merely throwing a ratchet in gear. Also a fine display of eight breaking plows, with polished shares and mould-boards of chilled iron, and malleable iron standards. They were of various sizes, from 10 to 16 inches cut; and the larger sod plows have revolving cutters or jointers.

J. R. Green, Indianapolis, for Bucher, Gibbs & Co., manufacturers, Canton, Ohio, showed the Imperial Breaking Plows, consisting of a group of thirteen plows, varying in size from a 10-inch cut to 18 inches; chilled iron or steel mould-boards, highly polished, and shares of steel and cast iron, so fitted as to be used interchangeably at will. A special device for elevating or lowering the draft by an adjustment of the clevis was noted as a point of merit. The materials used were of the first quality, and the workmanship showed a high degree of skill.

The Weir Plow Company, Monmouth Illinois, from the branch house in Indianapolis, exhibited a group of plows, among which we deem worthy of special notice, a sulky plow with an ingenious device for lifting the plow out of the ground with horse power, by an interference with a spoke of the wheel when in motion. By a sliding adjustment the plow can be set to or from the land, so as to accommodate it to two or three horses. Also an iron-beam walking cultivator, with an arrangement for hitching the team so as to divide the direct draft equally between the beam and tongue. Likewise three classes of breaking plows; sod, stubble and general purpose plows. Each of these showed specimens of steel and chilled iron, and each had samples of wood and iron beams—in draft requiring from one to three horses. Also a combined sulky and walking cultivator and a double shovel, all of good workmanship and fine finish.

L. Yinger, Indianapolis, exhibits the Slusser sulky plow, which is a strong, well-made riding plow of the generally approved pattern. With a team of three horses it will do good work. Mr. Y. also showed an attachment for using an ordinary walking plow as a sulky.

C. E. Merrifield, Indianapolis, had on exhibition six two-horse cultivators, among which the Brown walking cultivator has the special merit of an adjustment to force the shovels into the ground by the draft without special exertion of the plowman. Also the draft is equally divided between beam and the tongue. In the same group is a sulky cultivator with a jointed tongue, by which means, it is claimed, a greater motion is given to the shovels. The same party exhibited the Cassaday sulky plow, which is peculiar in having no land side, the lateral pressure being sustained by inclining the off wheel outward at an angle of 30 degrees. It claims a saving of 20 per cent in the draft.

James M. Buchanan showed a heavy iron-framed road plow, that with a sufficient team will do good service.

Tyner & Hadley, Indianapolis, exhibited a complete line of plows, among which we note as worthy of special attention, the Mishawaka plow—chilled iron and steel, both iron and wooden beams, the Aughe steel plow, Troy Champion, steel, one, two and three-horse plows. All these were complete in material and finish. The same party also exhibited the Dayton sulky plow and the Moline and Hughs' sulky, both riding plows of merit. In the same group we find the Mishawaka walking cultivator and the Malta combined riding and walking cultivator. To this last, was attached a pair of light cultivator harrows, (entered by J. A. Wood, Greensburg, Ind), which we regard of special merit in the cultivation of corn in its early stages; also, the Long and Alstatter cultivator, with an adjustment to regulate the width of tread between the wheels. Each horse operates his own plow independently. In the same group we observed an iron framed sulky, with the plow operating on the off side of the wheels, while these ran entirely on the unbroken land, two horses walking on the land and one in the furrow. The arrangement is a great relief to the team, and if side draft can be obviated, will be worthy the attention of farmers. A notice of a very complete stock of road making tools, such as road plows, scrapers, surface graders, etc., will close our observations of the very large collection of implements in the plow line showed by Tyner & Hadley.

Daniel Unthank, Indianapolis, exhibited a two-horse walking cultivator, of very fine workmanship and high finish. In several points, this implement departs from the general pattern of cultivators, which departures are claimed to be improvements, but our space forbids our describing them in detail.

A. Conde & Co., East Germantown, Ind., exhibited a group of plows, five in number, two and three-horse sizes. Polished steel mould-board and share, and malleable iron standard. Strong and well made.

Furst & Bradley, Chicago, Ill., showed a collection of twenty plows, embracing the various sizes of 10 to 16 inches of land cut. Sixteen of them are made of steel, hardened and highly polished, and four are of burnished chilled iron. In the group were two sulky plows of different sizes, with the usual adjustments for regulating depth, width of cut, etc. The hand plows represented sod and stubble breakers and general purpose plows; also, two sulky cultivators of good pattern and fine workmanship and finish.

SECTION II—SEED DRILLS AND CORN PLANTERS.

Johnson, Gere & Truman, Oswego, N. Y., by *J. A. Moffit, Agent,* exhibited an eight-hoed combined seed drill and fertilizer. It has a force feed and can be adjusted to sow various kinds of grain or flax seed in quantities varying from one to ten pecks per acre. The attachment for distributing commercial fertilizers is very complete, and will do its work uniformly and well. The same party exhibited a nine-hoed drill without the attachment.

The Farmer's Friend Manufacturing Company, Dayton, O., exhibited three wheat drills of an approved pattern and good workmanship. The same company showed a double-row corn-planter, dropping by hand-lever or check-row attachment, consisting of a wire stretched across the field and check balls at the proper distance apart for the rows.

George W. Brown, Galesburg, Ill., showed two corn-planters, the Excelsior and the Imperial. The first of these has a spring attachment to keep the runners in the ground. Both plant two rows, and are hand-lever dropper, but have arrangements for attaching the wire-check row-drop.

P. P. Mast, Springfield, Ohio, exhibited a wheat drill with fertilizer and grass seed sowing attachments. The hoes are set on rubber springs and the adjustment is complete for regulating the amount of grain, grass seed or fertilizer to be distributed. The hoes have movable points, so that they can be sharpened when necessary or replaced when injured; also, a five hoed one-horse drill for corn ground. These were all made of good material and excellent workmanship.

Jefferson Caylor, Indianapolis, showed two grain drills with hoes set on rubber springs. One of them had an attachment for distributing bone meal or other fertilizer in the drill with the proper regulator for determining the amount distributed.

Mechanicsburg Machine Co., Mechanicsburg, Ohio, exhibited an iron framed grain drill with screw feed and spiral springs to keep the hoes at a uniform depth in the ground. A strong and very durable drill.

The Wain Manufacturing Co., Grand Haven, Mich., displayed a two-horse corn planter, dropping double rows by hand lever. The drop plates are rotated by an endless chain so as to make the drop absolutely at the same time in each row.

C. E. Merrifield, Indianapolis, exhibited the Union wheat drill, manufactured by S. B. Hart & Co., Peoria, Illinois. The Union drill departs from the usual type of wheat drills in several points. The driver's seat is placed behind the drill box so as to secure to him a better point of observation. The wheels are larger in diameter and wider on the tread than common drills. A register is attached showing the number of acres sowed at any time. The drill is of excellent workmanship and good finish.

J. M. Nichol & Co., Indianapolis, had on exhibition four one-horse drills for seeding in corn ground; two three-hoed drills; one five-hoed drill and one with six hoes. The drills are operated without cog gearing and have indicators determining the amount of grain sowed per acre. The hoes are hinged as in the two-horse drills, and are hung on wooden pins.

D. E. McSherry, Dayton, Ohio, showed a grain drill with eight hoes. The weight of the driver and grain box is thrown back of the axle so as to relieve the pressure of the tongue on the horses' necks; also a drill with a fertilizing attachment so arranged that it can be thrown out of gear at any time and the drill used without it. Both drills are well made.

E. Over, Indianapolis, exhibited one-horse grain drills, three and five-hoed, for seeding in corn ground. They are well proportioned, and like everything else from this shop, are well made.

Wayne Agricultural Company, Richmond, Ind., showed the Champion grain drill. The hoes are adjusted by means of steel springs. The feed adjustment makes a very regular distribution of the seed. The same company exhibited a broadcast sower with a very ingenious and efficient arrangement for scattering the grain more evenly than it can possibly be done by hand sowing.

R. Davis, Sharpsville, Indiana, showed a check-row marker for corn. It is on wheels, and marks five rows at once. A convenient implement.

Rude Brothers, Liberty, Ind., exhibited a wheat drill whose chief merit is its simplicity. It is a force feed and easily regulated to sow any desirable amount of grain. It is neat, light and simple.

Deere & Mansur, Moline, Ill., exhibited three corn-planters, to-wit:

1. A plain, double-row, hand-drop planter, dropping a given number of grains very accurately.
2. A drill planter, with an adjustment for regulating the space between the grains in the row.
3. A wire check-row planter, dropping by the usual wire and balls.

The implements are well made and cover the entire demand in corn-planting.

Tyner & Hadley, Indianapolis, in a large collection of farm implements, showed a broadcast sower for either seed or commercial fertilizer; a very convenient implement. Also two grain drills, one with fertilizing attachment and the other without. Also the Victor one-horse drills, three and five-hoed, and a single-row corn drill. Also the Avery check-row corn-planter, using the wire and balls. The check-row arrangement may be detached and the planter used as a hand-dropper. Also the Union corn-planter, with or without check-row attachment, with either rotary or sliding drop-plates, the slides working on rollers, the rotary changes feed without changing plates. Also, Hayworth's check-row dropper, using either cord or wire, with an ingenious device for changing the line at the end of the row without detaching it.

Vandiver Corn Planter Co., Quincy, Ill., exhibited the Barlow rotary drop corn planter. It drops by a hand lever and is a double row planter. It drops a given number of grains with great regularity. Also the Barlow corn drill with an adjustment regulating the space between grains in the row.

Beedle & Kelly, Troy, Ohio, exhibited three corn planters; one a hand dropper operated by a lever, planting two rows. The others are drills but so constructed that they may be used as hill planters if desired. They are simple, strong and well made.

SECTION III.—HARROWS AND PULVERIZERS.

Moline Plow Co., Moline, Ill., had on exhibition a sectional harrow, each section being hinged to its fellow by a flexible joint, and detachable when desired. When connected, the harrow accommo-

dates itself to the inequalities of the ground, and by detaching a single section, a light one-horse harrow is furnished.

The Weir Plow Co., Monmouth, Ill., exhibited a gang harrow, consisting of three square harrows so connected that either one or both of the outside harrows could be turned back on the middle one, and thus give less width and greater weight.

Reed & Co., Kalamazoo, Mich., exhibited a spring-tooth harrow. The teeth of this implement consist of bows of spring steel, the flattened points of which operate as a number of small cultivators and will effectually pulverize the surface of the ground. Various sizes from a one to a four-horse harrow.

E. Bement & Sons, Lansing, Michigan, showed a spring-tooth harrow of novel construction. The teeth are of spring steel, slightly curved at the point and reinforced by a pair of spiral springs attached to each tooth.

E. Over, Indianapolis, exhibited a jointed triangular harrow with thirty steel teeth, so arranged as to make an implement well adapted to thorough pulverization of the soil.

R. P. Kimberlin & Co., Indianapolis, had on exhibition an iron framed sectional harrow with teeth so attached that they can be set at any desirable angle that the harrow will clear itself in heavy stubble or other rough ground. It is a strong and durable implement.

Phelps & Bigelow, Kalamazoo, Mich., exhibited the Vibrator gang harrow, hinged so as to accommodate itself to uneven surfaces. The teeth are steel and are inclined backward so as not to choke or clog in rough ground.

M. S. Heacock, Dublin, Ind., showed a platform harrow and pulverizer combined. It is an implement adapted to a very wide range of application in the cultivation of a clay soil, disposed to be cloddy. It is simple, easily managed, and not liable to get out of order.

Jefferson Caylor, Indianapolis, exhibited a double disk pulverizer, with six revolving disks in each set, and these placed at an angle with the direction in which the team is moving. As an implement to effectually stir newly plowed ground and thoroughly pulverize it, this pulverizer has high merit.

SECTION IV.—HARVESTERS AND RAKES.

Jefferson Caylor, Indianapolis, exhibited a self dumping horse rake, with a continuous wrought iron axle. The teeth of spring steel, have a spiral coil at the base.

C. E. Merrifield had on exhibition two horse rakes—the one a hand dumping rake with very long teeth and consequently great capacity of winrow; the other a self-dumping rake of the same general pattern; also a hay-loader, consisting of a revolving rake and elevator attached to a wagon, by which arrangement it is intended to gather the hay and carry it up to the loader on the wagon, dispensing entirely with hand work. If the design can be carried out, this will prove an important labor-saving device; also, the Buckeye harvester, a wire self binder, Miller's patent. It is chiefly remarkable for the simplicity of its construction. Made at Akron, Ohio.

Walter A. Wood, Chicago, Ill., by John Osterman, Agent, exhibited a self-binding harvester, using twine in the operation. It ties the double bow knot, common to twine binders, by a very simple and yet efficient device. It showed a complete control of the reel to accommodate it to different conditions of the grain. The same party exhibited a wire-binding harvester and a sweep-rake reaper. All good implements of their kind.

Sandwich Manufacturing Company, Sandwich, Ill., by W. M. Jones, Agent, exhibited two self-binders, the one binding with twine and the other with wire. They carry the grain from the platform to the binder by the vibrating elevator, by which means it reaches the binder without being tangled. Good implements and easily managed. The reaper in each of these machines makes a cut of six feet, and they claim to do this without materially increasing the draft.

D. M. Osbourn, Auburn, N. Y., Wm. J. Wheeler, Agent, exhibited a group of harvesting implements, consisting of two self-binders; one binding with twine, the other wire, both doing their work with neatness and dispatch. Also a combined reaper and mower, with rake attached, and a combined machine with dropper. The same party exhibited an independent self-raking reaper and an independent mower. All the implements were made of well selected material and of good workmanship. The machines were all furnished with a removable steel ledger plate in the guard, rendering repairs at this point easy.

J. B. Haywood, Indianapolis, showed a twine-binding harvester of the old reliable McCormick pattern. It is a strong, well made machine, somewhat heavy, but will do good work.

Wayne Agricultural Works, Richmond, Indiana, exhibited a self-raking reaper (Royce pattern), five feet cut and very light draft. The machine is well made.

J. F. Seibling, Akron, Ohio, showed the Empire combined harvester. It has a table rake, and has reduced its gearing to extreme simplicity. It has a special arrangement for securing fallen grain, that looks as though it would do good service; also, the Combined Empire, with sweep rake and drop attachment. The same party exhibited an independent reaper and mower of the Empire pattern.

Dickson & Co., Indianapolis, showed the Champion twine binding harvester. It has a spiral spring for regulating the tension of the canvas platform, in wet or dry grain, and a convenient adjustment to secure any desirable height of stubble. The cutter-bar is supported by a truss brace under it. The same party also showed two self-raking reapers and a mower, all of good workmanship.

Tyner & Hadley, Indianapolis, exhibited a self-dumping, spring-toothed horse rake of good workmanship.

Indiana Exchange, Indianapolis, E. S. Pope, agent, exhibited the St. Paul twine binding harvester, a well built, smooth running machine, binding with twine, tying the usual double bow knot. Also self-dumping hay rake of good workmanship.

SECTION V.—GATES AND FENCES.

Reeves & Co., Columbus, Ind., exhibited two automatic gates, both operated by the wheel of the vehicle passing. The one opens both ways and always from the driver, the other opens but in one direction and is moved, both in opening and closing by the force of gravity.

T. R. Cook, Indianapolis, exhibited an automatic gate operated by the carriage or wagon wheel. It opens and closes by a pair of spiral springs. It requires but little force to move it.

J. E. Garrett, Scott county, Iowa, showed a farm gate hung by a pivot in the middle of the upper rail. It opens by lifting instead of turning, and is operated by a cord and hand pull. It is proof against deep snow.

E. Over, Indianapolis, exhibited an automatic gate operated by the passing wheel, but acted on by separate rods for opening and closing, the rods always acting by traction and never by pushing. The arrangement is a good one.

John D. Shannon, Piqua, Ohio, showed the Eureka drive gate. It is opened by a lever. The gate is hung in the middle, and is suspended on arms so as to move with but little force.

Kelso & Hickey, exhibited a gate that is opened and closed by a heavy weight in a boxed post, which acts like a clock weight, and requires to be wound up at intervals. It is operated by a wire and hand pull.

Owen & Small, Carmel, Ind., had on exhibition a gate made of iron frame-work, filled in with wire netting. It is made to operate automatically. The same exhibitors showed a specimen of the Sedgwick wire fence. The net work is made by machinery, and when put on substantial posts, makes a handsome, strong, durable and cheap fence.

SECTION VI.—MISCELLANEOUS ENTRIES.

George W. Brown, Galesbury, Ill., exhibited the Leidy stalk cutter. A revolving cutter, operating six knives, cutting the stalks by pressure on the ground into sections of ten inches in length.

P. P. Mast, Springfield, Ohio, showed apple mills of two sizes. Single horizontal feed-roller above and two crushing rollers below. Operated by crank and fly-wheel.

Weir Plow Company, Monmouth, Ill., exhibited a trippletree for equalizing the draft when working three horses abreast. A good thing.

J. E. Porter, Ottawa, Ill., exhibited a horse hay fork and carrier for mowing hay, adjusted to a wooden track, and the same constructed for an iron track. An important labor saver.

C. E. Merrifield, Indianapolis, showed a horse hay fork and the Hoosier hay carrier, operating on a wooden track, with friction rollers, and a good device for protecting the rope in discharging the load. Made by J. C. Wingate, Crawfordsville, Ind.

Tyner & Hadley, Indianapolis, exhibited a large collection of farm and barn tools, among which we note Baldwin's power fodder cutters, with safety fly-wheels; also Silver & Deming's cutters, for hand power. These machines effect a great saving where corn fodder is fed to stock. The same party showed five sizes of the Big Giant corn and cob crusher, to be operated by horse power by means of a sweep; likewise two sizes of the Victory corn and cob mill, to be run by belt, and a French burr corn mill on a horizontal shaft; also the Challenge feed mill (metal), with corn sheller attached, which can be used separately if desired. There is a meal

bolt connected with this mill which may be used at will. Two hand corn shellers of different sizes, and two combined hand and power shellers were noted in this collection, as also was the Victor cane mill and Cook's evaporator, in good order for making syrup. A root and vegetable cutter, for preparing that kind of food for stock, and three sizes of the American cider mill and press, were also exhibited. In the same collection we found the Avery stalk cutter, with knives set spirally, and adapted to cutting one or two rows, as desired, and also a full assortment of gardener's tools, made by Allen & Co., and a potato digger well adapted to accomplishing that hard work by horse power.

Tyner & Hadley also exhibited the Goshen wooden pump with a porcelain-lined piston chamber, and lastly we inspected one and two-horse inclined plane powers, with governors, that completely controlled the speed.

P. Smith, Bro. & Co., exhibited a portable power corn-sheller, with a capacity of 1,500 bushels of corn per day with proper attendance.

Jefferson Gube, Auburn, Ind., exhibited a hand-power fanning mill with screens for separating all impurities from grain. A convenient thing to have in a barn.

Wm. H. Dungan, Indianapolis, showed a bag-holder, which saves one hand at the threshing. Every farmer should own one.

Abijah Cassell, Indianapolis, exhibited a hay and straw stacker, operating by horse power, and designed to carry the hay or straw to the top of a stack 25 feet high.

J. I. Knapp, Adrian, Mich., exhibited a tile and brick machine, making round tile, and doing good work. It claims a capacity of 15,000 brick per day, with a ten-horse power.

Chandler & Taylor, Indianapolis, exhibited the old and reliable drain tile machine which pioneered the drainage interest in this State, and by its various improvements, has been able to maintain its standing in the public confidence to this time.

E. Over, exhibited a power cider press, operating by a double-gear screw. A machine of great power and easily operated. Also a road scraper made of plate-steel, very strong and light; likewise a cane mill with three horizontal rollers, propelled by belt, and an iron grave-enclosure, of artistic design.

Champaign County Manufacturing Co., Urbana, Ohio, exhibited a ditching and tile-laying machine. A mole forms a ditch by upward and lateral pressure, in which the tile is laid as the engine proceeds, and the ditch closes itself. It claims a capacity of 100

rods per day, at a depth of two feet. In heavy clay it will not operate well at a greater depth, and this is scarcely beyond the reach of frost in this climate.

J. D. Milick exhibited Sprout's hay elevator and carrier, made at Muncy, Pa. The track descends at the outer end so that the load moves forward at once on reaching the track, thus rendering the draft steady and uniform. Also a combined hay fork and knife. The cutting edge is on the rigid part of the bar and cuts by a shear motion.

Wm. Burford, Indianapolis, showed fine specimens of book binding and lithographing, and a splendid collection of blank books and stationery.

Charles Soehner, Indianapolis, exhibited a variety of pianos, organs, etc., and a fine stock of goods pertaining to the musical art.

D. H. Baldwin, Indianapolis, showed pianos and organs of fine tone and high finish, and other musical instruments, in full assortment.

The Howe Sewing Machine Co., by E. D. Olin, Indianapolis, exhibited the old reliable Howe sewing machine, with its latest improvements.

W. H. Idings, Indianapolis, showed the Eldridge sewing machine, a light running general purpose machine.

E. E. Brown, Indianapolis, exhibited the Domestic sewing machine. The shuttle, needle and feed motions are produced by an eccentric and lever. No cogs nor cams in the machine; very light running and entirely without noise; exceedingly simple in construction.

Davis Sewing Machine Company, Chicago, Ill., exhibited a sewing machine in which the feed has the peculiarity that the presser foot rises entirely clear of the goods before the feed motion moves forward, rendering the stitch uniform. It does fine work.

Wheeler & Wilson Sewing Machine Company, Indianapolis, showed the machine which bears their name, and which has a well established reputation. It substitutes a revolving hook for the shuttle. A late improvement is a hollow needle-bar, thus diminishing the weight.

R. E. Stephens, Indianapolis, exhibited the White sewing machine. This is a shuttle machine, producing its motions by an eccentric. It is simple, light-running and noiseless.

Indiana Farmer Company, Indianapolis, displayed a fine collection of premium corn, and distributed copies of the only weekly agricultural paper in the State.

C. F. Rockwell, represented the *Journal of Commerce*, a weekly paper, devoted to commercial interests. Published in Indianapolis.

Farmers' Review, a weekly agricultural and miscellaneous paper, published in Chicago, Ill., and represented by Dorman N. Davidson, Indianapolis. It claims a circulation of 25,000 copies, weekly.

P. H. Kelly, *Indianapolis*, showed a fine display of cologne, in various sized bottles.

Scoville & Co. Indianapolis, displayed a large collection of inks; black, green, purple and scarlet, claimed to be non-corrosive.

H. Streicher, *Chicago, Ill.*, showed a stock of fine jewelry.

J. E. Hirst, *Cincinnati*, exhibited an automatic gas generator, using gasoline and atmospheric air.

H. Pyburn displayed a large assortment of candies manufactured at his factory in Indianapolis. We tested their quality and found them excellent.

W. A. Schenk, *Fulton, N. Y.*, exhibited a cider mill with three horizontal rollers, and screw press, both operated by hand.

S. P. Harrington, *Indianapolis*, showed a corn-stalk cutter operated on a new principle. It has steel rake teeth which lift the stalks from the ground, and a series of revolving wheels, armed with knives, running at a rapid rate, cut them. It is a good implement, but too high-priced for small farmers.

GENERAL REMARKS.

The fair of 1880 had the best display of the implements and tools of the farm, whether considered in regard to the number exhibited, the workmanship and finish of the several exhibits, or their adaptation to use, that has ever been made in the State. The superiority of our farming consists not so much in our modes of cultivation, nor in the thoroughness of our work, as in the excellence of the implements and machines furnished us to work with. In this we acknowledge our indebtedness to the inventive genius of the American people, and the faithfulness and skill of our mechanics. The unparalleled progress of the last half century in this direction is astonishing, and yet each year excels its predecessor in the rapidity of this march.

At the late fair it was easy to see to what special points of improvement the attention of the public was chiefly directed. Among farm implements, the self-binding harvesters were the chief attraction. The recent introduction of twine binding, and the complete

success in making a perfect knot that neither comes untied nor slips, kept a crowd around those machines from morning till night. Many persons object to the use of wire in binding, whether with good cause or not, and the introduction of twine, which removes this objection, and is no more expensive, creates a decided sensation among those most interested; and well it may, for binding harvesters are, *par excellence*, the improvement of the present time.

Next to the binders, the Sulky plows and cultivators were, perhaps, the largest center of attraction. We are not willing to believe that it is altogether the prospect of riding on a cushioned seat while at work, that furnished this attraction. The ability to do more, and better work in a given time is no doubt the chief motive that calls attraction to these improved plows. There is a great difference between finishing a row of corn at once, and the old process of "three times in a row." It is not so much the saving of labor that we seek, as the making of labor more productive. If the labor of passing once through a row produces the same results that passing three times formerly did, we very naturally incline to it.

Considerable attention was drawn to the combination of an apparatus for distributing commercial fertilizers, with wheat drills; and in many parts of the State they will, no doubt, soon come into general use.

Harrows and pulverizers received a fair share of attention, but by no means as much as they deserve. Our farmers are just waking up to the high importance of a finely pulverized soil.

Respectfully submitted,

R. T. BROWN,

C. A. HOWLAND,

Committee.

REPORT OF FOURTH DIVISION
OF THE
COMMITTEE ON SPECIAL MERITS.

Articles Contained in Books "G" and "H."

The undersigned committee, appointed to examine carriages, furniture, upholstery, carpets, etc., entered in Books "G" and "H," respectfully report that they have carefully examined the various articles on exhibition, and have noted the points of merit in each, as fully as the hasty examination which they were compelled to make would allow. Owing to the impossibility of finding the owners of many articles on exhibition, your committee failed to get much desired information.

The display of carriages, buggies and farm wagons was remarkably good.

Shaw, Backus & Co., of Indianapolis, exhibited a very large collection of carriages, buggies and wagons of various kinds, the most notable of which was their solid-top delivery wagon, with platform springs and circle track, a paragon of perfection for beauty of finish and elegance of design; it certainly has no equal. The circle-track farm wagons exhibited by this firm are the most convenient, and apparently the most perfect wagons ever made or exhibited here.

A. J. Johr, Indianapolis, exhibited an improved phaeton and some very fine buggy tops of their own manufacture, a specialty with them.

Renick, Curtis & Co., Greencastle, Ind., exhibited their new patent slide and jump-seat—a most perfect carriage and buggy combined.

Robbins & Gerrard, Indianapolis, showed a fine collection of carriages and buggies. Their leading exhibit consists of a three-quarter top box buggy, hung on four half springs shackled to two side-bars and crossing each other, supporting the body at two points, enabling the body to be hung very low.

F. Bremerman, Indianapolis, exhibited two carriages and two buggies; a jump-seated carriage, remarkable for its simplicity.

A. A. Helfer & Son, Indianapolis, exhibited some very fine carriages; also a Timkin's gear side-bar buggy, a decided improvement over the old style; also a very fine two-seated Kellogg.

Charles H. Black, Indianapolis, exhibited a large assortment of buggies of superior workmanship.

C. Fockler & Brother, of Dubuque, Iowa, exhibited a good assortment of their new joint-brace carriage tops.

J. P. Wood, Indianapolis, exhibited a splendid collection of wooden dishes, brackets, etc. Also a great variety of paper sacks made by special machinery, said to be the only manufactory of paper sacks in the State.

The Udell Woodware Company exhibited a large assortment of their celebrated step-ladders of various sizes and patterns, and a general assortment of wooden wares.

G. G. Seaman, Indianapolis, exhibited a superior hand-cart, which attracted a great deal of attention.

J. H. Harford exhibited an adjustable single-tree, the most convenient and useful thing of the kind in use.

R. Frauer & Co., Indianapolis, exhibited harness and side-saddle.

J. Wesley Bennett, Indianapolis, exhibited some very fine specimens of portrait painting in ink and water colors, from old faded pictures.

Harry Shartle, Indianapolis, exhibited a very neat collection of photographs, porcelain finish, which were much admired.

F. M. Priest, Indianapolis, exhibited Adams' illustrated chart of Biblical and secular history, which attracted a great deal of attention, and appeared to be a work of considerable merit.

C. C. Raesner, Indianapolis, exhibited some specimens of pen drawing, of rare merit, showing great artistic skill.

Stephanna Schuster, city, exhibited a large assortment of notions.

H. B. Sherman, Indianapolis, exhibited a magnificent oil painting of his farm and stock, which was much admired; also, an unique collection of Esquimaux fur costume.

J. C. Wampler, Indianapolis, exhibited an oil painting by Miss Lizzie Webster, which was much admired.

R. E. & Florence Harrison, city, exhibited three pencil portraits.

Mary Ward exhibited an oil painting, ruins of Carthage, which was really a beautiful picture, the coloring being remarkably fine.

S. W. Ott, Indianapolis, exhibited his improved extension or folding-bed lounge.

Geo. Krause, city, exhibited a folding bed lounge; also, a bed and lounge of novel construction; the bed being drawn out from under the lounge on the back without interfering with the use of the lounge.

P. F. Bryce, Indianapolis, made a novel display of the manufacture of brushes, which attracted considerable attention.

The Shafer Desk Co. exhibited some of their fine desks which were much admired.

Charles Mayer & Co., Indianapolis, exhibited a fine collection of toys and notions.

David Kregelo, Indianapolis, exhibited an assortment of very fine burial cases and undertakers' goods in general.

The Folding Bed Company of Indianapolis, exhibited a variety of their justly celebrated folding beds. They are very simple in construction, being so arranged as to be completely balanced without the use of weights or springs. When folded, it makes a complete representation of a bureau, side-board, book-case or other articles of furniture. The book-case style is not only a perfect bed, but also a perfect book-case and secretary, the combination forming a highly useful and elegant article of furniture. These beds are so simple that they can be opened or folded by a child four years old. It folds with all the bedding and pillows necessary for the coldest weather, without disarranging or wrinkling spreads. It protects your spreads, pillows and bedding from dirt, coal dust, etc. It occupies only the space of a common bureau or wash stand, and can be as easily removed from one room to another.

S. L. Warner, Indianapolis, exhibited magnificent collection of burial caskets of most elegant styles and finish, among which the following were the most notable: an imitation rosewood and burl-walnut metallic casket, with glass pannels and mounted gold and silver trimming, lined with silk and satin; and black cloth draped casket, elegantly mounted with silver trimmings; one burl-walnut and rosewood oval-top casket, richly mounted gold and silver trimmings; one imitation rosewood casket, with sliding glass, silver mountings and trimmings. The great variety of burial cases, as well as the goods displayed, were all of the finest quality.

The When Clothing Store, of Indianapolis, is to well known to the people of Indiana, who visit the State Fair, to need any commend-

ation from your committee, they being the only house who have made a display of clothing and gent's furnishing goods at the State Fair for three years, each succeeding year making its display upon a grander scale than the preceding season. This fall they eclipse in magnitude and elegance anything ever seen in this class of exhibits in the West, not excepting our large cities even. Before they could display their goods to advantage they erected, at their own expense, a suitable stand, costing several hundred dollars. This stand was formed in the shape of a magnificent *palace car*, beautifully papered and ornamented, from which to exhibit a line of samples that would form a good stock for a small dealer, the entire display of clothing, representing everything conceivable that a child from two and a half years old might wear, to a suit or an overcoat that would be appropriate for the man with frosted locks, was surrounded by a line of glass show-cases filled with samples of the largest variety of gent's furnishings ever seen before, we believe, at any State Fair. There seemed to be nothing that man could suggest or desire in the line of wearing apparel or furnishing goods that could not be found in this beautiful palace car. The charming elegance of their display was evidenced by the dense crowd of admirers who continually surrounded their stand. In fact, all the space in that part of the hall was so thronged with admiring spectators that your committee found it impossible to gain access during the day to make their examination. The grandeur of this display, constituting as it did one of the most attractive and interesting features of the upper hall, was only equaled by the superior style and quality of the goods displayed.

The Dwinnell Brothers exhibited a very large and fine assortment of the justly celebrated genuine Hartford boot. Their display consisted not only of an extensive assortment of boots and shoes of every variety and style in the finished state, but in addition to this they exhibited a large quantity of the raw materials, so that people could see for themselves the fine quality of the stock used in their construction; and last, but not least, was the exhibit of boots in all stages of construction, showing the superior workmanship of their goods. They have earned for their work, and justly, too, a world-wide reputation. Having had many years of experience in this line of goods, we most unhesitatingly affirm that we have never seen on exhibition at any State Fair in the country anything to equal the samples shown, both for solidity, durability and quality of materials used.

The magnificent and unequalled display of fine furniture by Messrs. Sander & Recker, of Indianapolis, was one of the most interesting and

attractive features of the upper hall. The large assortment of fine furniture exhibited by this firm was all of the most costly material and exquisite workmanship. For beauty of design and excellence of finish their work is not surpassed by any of the eastern manufacturers, while the materials used are all of the very best quality, none other being used by them. Among the articles exhibited was a beautiful bed-room set of exquisite workmanship, finished in Japanese style. The peculiar feature of this set consists in the ornamentation being carved out of the solid wood of which it is constructed, instead of being glued on in the usual way. They exhibited a magnificent parlor set, trimmed in fine silk. This set was of most unique pattern, consisting partially of Japanese, Queen Annie and Turkish styles combined in one exquisite design of rare beauty. The new style of trimming introduced by Mr. Sander, which adds so much to the charming beauty of their parlor sets, is evidence of the good taste and skill displayed by this firm.

Their library set, in Japanese style, was a marvel of beauty, neatness, convenience and durability. The sectional book-case belonging to this set has only to be seen to be appreciated. The lounge and arm chair belonging to this set were trimmed in Morocco, rendering them neat and durable. The dining-room set, in Queen Annie style, was also trimmed in leather. The extension table was remarkable for its size and strength, a feature that will be appreciated by those who have used the old-fashioned rickety tables heretofore made.

Spiegel, Thoms & Co., made a magnificent display of their beautiful furniture. The elegant parlor set, in Japanese style, exhibited by this firm, consisted of two divans, covered in brocade silk, with fine silk-plush trimmings, and chairs to match; two fine marble-top tables, (German marble,) trimmed with ebony; a magnificent mantle mirror, French plate glass, with ebony trimming, and elaborate ebony easel; a chamber set, in Grecian style, which was greatly admired and coveted by the hundreds of ladies who viewed it. The bedstead was superbly grand, oil finish; a magnificent bureau with French plate glass and Tennessee marble top; a fine spring mattress, the envy of the weary sight-seers; three elegant chairs, with rocker to match, all covered with the richest and most costly tapestry goods, combined to render the display one of unequalled beauty and loveliness, which added greatly to the attractions of the exhibition. The quality of the furniture made by this firm has been so long and favorably known that it needs no comment from us. Their work is first-class in every particular.

The magnificent display of carpets and house furnishing goods, at the head of the stairway at the east end, was from the well known house of Albert Gall, of Indianapolis. This was one of the grandest and attractive features of the upper hall. Such a display of ingrain, tapestry, body Brussels and velvets of the latest styles and most handsome patterns, produced by the looms of the world, is seldom seen. A variety of the most beautiful styles of lambrequins were exhibited with charming effect. A most beautiful pattern of the style of Louis XIV, shows in medallion, a court scene upon French crape; the wings are raw silk, hanging in rich folds, the colors black and old gold, with fringe and tassels elegantly matched. Another pattern is called the Queen Elizabeth, the materials were of raw silk. The peculiarity of this pattern is its elegantly draped center, cut in exact geometrical proportions, with extended wings, displaying beneath its folds a pair of handsome real lace curtains. Another style is named the pole lambrequin, made of the new olive shade of silk of the French damask pattern. And still another, the mantel lambrequin, was simple in its character, is composed of Turkoman cloth trimmed in gold and black. The beauty and charm of the entire display consists not in mere groupings of the rich materials used in house furnishings and decorations, but Mr. Gall has, with these materials, wrought out a fac simile interior of a modern home complete. The good taste and admirable skill displayed in the arrangement of the whole affair, is what lent such a latent charm to the really beautiful picture, for it was a magnificent home picture, that was universally admired as evidenced by the constant throng of spell-bound visitors. Yet, beautiful as it was, it is only equaled by the quality and style of the goods, for Mr. Gall allows no one to surpass him in that respect.

The Moore Combination Desk Company, of Indianapolis, exhibited a great variety of their justly celebrated office desks. Their counting-house king, as they call it, is the most perfect and convenient desk for mercantile houses ever invented, combining as it does, the advantages of two complete desks in one—sitting and standing—which can be used at the same time without any inconvenience whatever, as the occupant of one desk does not interfere with that of the other in the least. It has a capacious table, occupying the entire width of the desk, and is supported and operated by metal slides; upon these slides the table can be moved into or out of the recess easily and instantly without removing from it a single document. It contains over 125 different compartments, arranged to secure the greatest convenience and practicability. The office

queen, a single sitting cabinet desk, is a marvel of neatness and convenience, occupying but little floor and wall space, yet containing a great number of conveniently accessible compartments. The writing table is its most valuable feature, being sufficiently large for all practical purposes. It can be readily moved in or out without having to remove the papers upon it. This desk is universally admired, and is equally appropriate for the use of ladies or gentlemen. Their improved flat top desks combines in a neat, substantial form, the elements of economy, compactness, convenience and durability; in fact, it possesses all the modern conveniences of a more expensive article. All their desks are built of thoroughly seasoned lumber (walnut and oak), put together in the most perfect manner by skilled workmen, and are warranted first class in every particular. These desks comprise two or more sections, each of which contains a sufficient number of filing cavities for the reception of documents of every variety used in business, which are planned and arranged to secure the most thorough utilization of every part. These sections are connected by self-adjusting hinges, and are secured by a single lock of the Yale manufacture. To say that the ladies desk, exhibited by this company, was beautiful, does not do justice to the subject, it was supremely *grand*; in fact, it is the most exquisitely beautiful, neat and convenient article of the kind ever produced in this country. The beautiful vines, flowers and ornamentation being composed of numberless pieces of inlaid woods of the most rare and costly kinds produced in the world, combine to make this desk the most charmingly lovely and convenient article of the kind for ladies use in existence. As a lady remarked while standing spell-bound before it, *a marvel of beauty*. The very acme of perfection.

In submitting the foregoing report, your committee would remark that they experienced a great deal of annoyance, and spent much time in the vain endeavor to find the owners of many of the articles exhibited, and if your committee have failed to notice or describe as fully as they might the merits of articles on exhibition, the owners will have themselves to blame for it, for not being present to give the necessary information.

All of which is respectfully submitted.

GEORGE LUPTON,

WM. SMITHER,

Committee.

REPORT OF THE COMMITTEE

ON

EDUCATIONAL EXHIBIT.

The educational exhibit displayed by the Purdue University comprised mathematical work, trigonometry, surveying, leveling and astronomy; industrial art and design, including crayon drawing, shading from models and machine drawing; perspective; clay modeling; German examination papers and translations; academic work—charts in history and physical geography, including map drawing; iron work from the mechanical department; products from the experimental grounds of the agricultural department, and the schedule collection of Coleoptera from the department of natural history, which has 7,000 specimens and over 2,000 designated species. This being the exhibit of an industrial and agricultural college, it was peculiar in its character, and reflects great credit upon the institution, which has for its objects the combining of the theoretical and the practical in such a manner as to teach the underlying sciences of art and agriculture with especial reference to their useful application. The exhibit was particularly worthy of notice in the work shown by the mechanical department, which includes work in three courses, viz: forging, machine work and vise work or filing. The completed models shown each illustrates a principle or a combination of principles, proceeding from the most simple to the more difficult. The models in forging show welding and tempering, drawing, bending and upsetting, until at the end of the course the student has made and tempered many different kinds of tools, including those to be used in his future lathe and machine work. The machine work includes plain turning and squaring of a few planed models, which proved to be very accurate, and screw cutting and taper fitting of the most delicate workmanship. The vise work was finely executed, and shows that system and instructions will, in a short time, make of the student a workman who can equal the skilled machinist. The work on these

models consisted of plane surface filing, squaring and, finally, fitting. Among the models attracting particular attention from mechanics visiting the Exposition, was a fitting made by mortising one piece of iron into another, so perfectly filed that although the inner piece could be easily slid in or out, the joint could scarcely be seen. Another was a screw cut by a file, and others were some excellent pieces of chipping. Of completed work, was shown a shaft coupling, made by a student, that would have done credit to any shop in the country. The specimen products from the experimental grounds of the University were very valuable, in showing the comparative growth of these various products under the same conditions. There were presented twenty-nine varieties of wheat, in grain and in sheaf; fifty-six varieties of potatoes, and thirteen of beans, besides several varieties of grass seeds, cane seed, etc.; five varieties of fertilizers used in experiments on wheat the past year, and a section of soil thirty-seven inches in depth, showing the nature of the soil of the experimental ground. This, in our opinion, was the most satisfactory and valuable feature among all the educational exhibits this year, and while we would commend each department of the Purdue exhibits as being especially satisfactory and showing a high degree of proficiency of students' work, we would recommend diplomas for the display in agriculture and in mechanics.

The display of drawings made by the Indianapolis Public Schools was worthy of notice. The system was that of Walter Smith, as presented in the American text books of art education, and aims primarily at teaching two things. First, *how to see* and *how to draw*; second, *how to arrange* the proper subjects for the application of *practice* in drawing. It gives a knowledge of all the geometrical forms and how to construct them, with the application of those forms in ornament and in the representation of common objects, at the same time that it develops manual skill in drawing. It also gives carefully graded instruction in various branches of the study which require the *application*, first, of *knowledge* of form, and second, of skill in drawing. Thus, besides a knowledge of *geometry*, as a basis of all forms, it provides for object drawing, by presenting the principles to be observed, in expressing both the facts and the appearances of natural and manufactured objects in their outline, in light and shade and in color. It provides instruction in practical design, by developing the taste and the creative powers of pupils in industrial design, in connection with the study in geometry of natural forms, and of historical ornament. It gives instruction in mechanical drawing, teaching the elementary principles of machine drawing, architectural drawing and drafting for civil engineering. It includes a

harmonious grading of all these branches of the subject, with reference to the development of good taste, artistic skill and expression, and an appreciation of the beautiful, both in nature and in art.

Exhibit of drawing by J. M. Olcott, Forbinger's system, representing the work done by two hundred different pupils connected with the public schools of the State, where Forbinger's drawing is used. The advantages of this system are: 1. Solid surface, which obviates the elasticity or spring so objectionable in ordinary drawing books. The size and compactness is a matter of great convenience. 2. Their practical character. The useful has not been sacrificed to the ornamental. 3. Careful gradation of exercises. No complete design is attempted before the parts thereof have been drawn separately. 4. The charm of novelty is maintained. The different sheets of the tablet are fastened together in a manner that makes it impossible for the pupil to see the lesson in advance. 5. Abundance of material. The tablets contain a greater number of pages and exercises than any of the ordinary drawing books. The material is of superior quality. 6. A Comprehensive Teachers' Manual accompanies each number of the tablet, which enables any person capable of giving instruction in other branches, to teach this successfully, even without special preliminary training for this purpose.

Diplomas were awarded to Chas. C. Koerner, President of the Bryant & Stratton Indianapolis Business College on business writing, ornamental penmanship, off-hand flourishing, pen drawings, pen portrait, card writing, stipple work and display of penmanship.

To Professor C. N. Hamilton, teacher at the Bryant & Stratton Indianapolis Business College, upon penmanship, pen portrait, pen lettering and pen drawing.

A diploma was awarded to Charles J. Dunmeyer, student of the Indianapolis Bryant & Stratton Business College, upon a set of books which he exhibited, and which showed many points of excellence and labor-saving methods.

A. W. BRAYTON,
J. CARLETON,
Committee.

A CLOSING INCIDENT.

The unparalleled success of the Indiana State Fair of 1880, created an enthusiasm with the exhibitors in the agricultural machinery department that found expression in a manner long to be remembered by the participants.

We copy the following from the Indianapolis Journal, of October 2, 1880:

"Hon. Alexander Heron, Secretary of the State Board of Agriculture, was the recipient of a handsome and elegant gold-headed ebony cane, last evening, the following gentlemen, exhibitors at the fair, being the donors. The presentation was made at the parlors of the Grand Hotel, and was in consideration of Mr. Heron's services during the fair. The recipient was present by a ruse, and ushered into the presence of over one hundred persons assembled. The presentation speech was made by William Gause, with J. F. Seiberling & Co., Akron, Ohio.

"Charles Brookbank, Fayette county; C. E. Merrifield, implement dealer, Indianapolis; Jefferson Caylor, implement dealer, Indianapolis; Fassler, Whitely & Kelly, manufacturers Champion reaper, Springfield, Ohio; Henry L. Conde, implement dealer, Indianapolis; E. Over, manufacturer grain-drills, Indianapolis; Tyner & Hadley, implement dealers, Indianapolis; Mr. Byfield, implement dealer, Indianapolis; Seiberling & Co., manufacturers Empire reaper, Akron, Ohio; Aultman, Miller & Co., manufacturers Buckeye reapers and mowers, Akron, Ohio; Farmers' Friend Manufacturing Company, manufacturers Farmers' Friend grain drill, Dayton, Ohio; Rude Bros., manufacturers Indiana grain drill, Liberty, Indiana; Beedle & Kelly, Champion corn planter, Troy, Ohio; Long, Alstatter & Co., manufacturers sulky plows, etc., Hamilton, Ohio; B. D. Buford & Co., manufacturers sulky plows, etc., Rock Island, Illinois; C. Fockler & Co., manufacturers buggy tops, Dubuque, Iowa; Deere and Mansur Co., manufacturers Deere corn planter, Moline, Illinois; Deere & Co., sulky plows, etc., Moline, Illinois; S. S. Merrifield, implement dealer, Connersville, Indiana; Oliver Chilled Plow Company, chilled plow manufacturers, South Bend, Indiana; S. B.

Hart & Co., Union grain drill manufacturers, Peoria, Illinois; James Selby & Co., manufacturers of Union corn planter, Peoria, Illinois; Hoosier Drill Manufacturing Company, Richmond, Indiana; Moline Plow Company, sulky plows, etc., Dayton, Ohio; J. Lane Reed & Co., sulky plows, etc., city; Edward Pope, implement dealer, city; D. M. McSheery & Co., grain drills, Dayton, Ohio; P. P. Mast & Co., grain drills, Springfield, Ohio; South Bend Plow Company, sulky plows, etc., South Bend, Indiana; Weir Plow Company, sulky plows, etc., Monmouth, Illinois; Bucher, Gibbs & Co., Imperial steel plows, Canton, Ohio; George W. Brown & Co., corn planters, etc., Galesburg, Illinois; J. C. Wingate, manufacturer of Hoosier hay-carriers, Crawfordsville, Indiana; Walter A. Wood & Co., reapers, etc., New York; D. M. Osborn & Co., reapers, etc., New York; Wayne Agricultural Company, grain drills, Richmond, Indiana; Brown Manufacturing Company, cultivators, etc., Zanesville, Ohio; Wait Manufacturing Company, Challenge corn planters, Grand Haven, Michigan; Studebaker Bros. Manufacturing Company, wagons, South Bend, Indiana; Mast, Foos & Co., wind engines, Springfield, Ohio; Hurst, Dunn & Co., steam corn planters, Peoria, Illinois; J. C. Hoover, Monarch separator, Hamilton, Ohio; Chambers, Berring & Quinlan, Barnes's check-rower, Decatur, Illinois; Haworth & Sons, check-rowers, Decatur, Illinois, and others.

PRESENTATION ADDRESS, BY WILL GAUSE.

Gentlemen: When an attorney is called upon to defend a criminal at the bar it is generally expected that he should make an elaborate speech, but when the man arraigned already stands guilty before the bar of public opinion, it is useless, sometimes, for the attorney to have much to say.

Alexander Heron, you have been arraigned before this assembly to-night on a charge you need not be ashamed of. We have known you in the capacity you now hold, as Secretary of the State Board of Agriculture, for a long time, and it has been a pleasure to us to meet you annually at your post of duty, where we have always received a hearty welcome from you, besides all the friendly assistance necessary to aid us in the prosecution of our work; and here let me add, that quite a number of us have been attending different State and district fairs for a good many years, and it is the unanimous verdict that no other association offers such facilities to exhibitors in our line to exhibit, advertise and make sale of our goods as the Indiana State Fair.

Mr. Heron, having in view all this past kindness and consideration, it would not be expected of us to find a verdict of acquittal in your case, as the charge is that you have always been our friend.

Now, as we have found you guilty, it may be well for us to here inform you that, as a punishment, we have decided to *cane* you. Some men have been caned to their great discomfort and pain. Allow me to say, it is not our intention to inflict that kind of punishment upon you to-night, but, on the other hand, we desire that the memories and associations of this evening may linger pleasantly with you and with us until time shall be no more.

These gentlemen here assembled represent almost, if not quite, all the great manufactories of agricultural implements and machinery in the United States, together with the dealers in that line, of this city; and now, on their behalf, allow me to present you with this cane, as a token of our high regard and friendly feelings toward you. I beg you to accept it and hold it in memory of us.

RESPONSE BY MR. HERON.

Gentlemen: I thank you for this kind appreciation of service in the sphere of life in which my lot has been cast. Such exhibition of good will does much to smoothe the rough pathway of life and goes a long way to compensate for weary hours spent in labor that is, at times, overwhelming and discouraging. Language fails me to express my feelings on this occasion; the surprise has unnerved me. Although having so recently passed safely through an ordeal that tries the nerve of one in my position, that is a successful State Fair, for which we in a great measure hold you responsible, you will therefore excuse extended remarks. I will ever keep and cherish this splendid present in remembrance of the kind friends here assembled.

ESSAYS.

REVIEW OF AGRICULTURE IN INDIANA.*

BY DR. R. T. BROWN.

Sixty years ago Indiana was almost an unbroken forest. Before the war of 1812, the Indian title had been extinguished to a narrow strip of land, embracing the Whitewater valley along the eastern border of the State and the Ohio river counties lying south of a line drawn from the northeast corner of Ripley county, to the Wabash river, a few miles north of Terre Haute. This cession of 1810 included the hilly section of the State, drained by the direct tributaries of the Ohio river and the lower course of White river and the Wabash, leaving the great central and northern plain a hunting ground for the red man.

In 1818, the Delaware, Miami and Potawatamie Indians, relinquished their claim to all the lands in Indiana, excepting the Miami reservation on the Mississinnewa and a small Potawatamie reservation on Eel river of the north. This opened up for settlement the great interior region of the State, and brought into the market the largest body of fertile, level, timbered land that has been offered at any one time in all the history of western settlements. This region was familiarly known in those days as "the New Purchase," and was justly celebrated for the exuberant fertility of its soil and its numerous eligible ague seats. Fortunately for Indiana, land speculators had not yet found their way to these western wilds, and when the land sales opened in October, 1820, the purchasers were small farmers, seeking homes for young families. But few purchases exceeded 160 acres, and many were limited to half that amount; but the purchasers were all actual settlers. Few

* Delivered before the annual agricultural convention.

persons now living have any just conception of the *density of the forest* which originally covered the central plain of Indiana, or of the labor required to remove it and fit the land for cultivation. Huge trees interlaced their boughs above and shut out the sunshine from the earth beneath, while dense jungles of spice wood, papaw and other undergrowth made a second roof, while nettles, waist-high, woven together with clinging peavines, covered the earth below, and almost bid defiance to penetration. But the backwoods pioneer had strong arms and a stout heart, and the forest surrendered its dominion of centuries to his indomitable energy.

The first care of the immigrant was to furnish bread for his family, and this he was generally able to do the first year of his log cabin life. At first, his farming was rough and his implement rude. His fields were full of stumps, and, often, the yet undercayed roots of the late forest almost bid defiance to the plow. But the hogs lived and fattened on the mast, and the cows found abundant food in the wild range while summer lasted, and in winter the spice brouse supplemented the fodder shocks. These first settlers, however, soon began to have a surplus of bread and meat, that found a ready sale to the new-comers who generally brought money enough with them to carry them through the first year.

This *primitive stage of farming* continued till about 1830, when agriculture in Indiana entered on a new era. The farms were improved, both in extent and condition of the fields, and a large surplus of corn was produced, but there was no market for it. Those who lived near the Ohio, the Wabash or White river, sent their grain by flatboats to New Orleans, but the condition of the roads limited this market to those who lived within a few miles of these streams. Others put their corn into pork, which furnished its own transportation to market. Cincinnati profited by this circumstance, and became the Porkopolis of the west. From 1830 to 1840, pork was the almost exclusive source of revenue to the Indiana farmer. This led attention to improving the breed of hogs and bringing them to an early maturity, and from this period we may date our improved stock in that line; but this hog farming rapidly reduced the fertility of our virgin soil, and by its hard labor broke down many a stalwart pioneer. Moreover, it had a pernicious influence on the domestic commerce of the country. The crop came into market but once a year, and the farmer lived the whole year on the credit of his pigs that were not yet weaned. This fostering of a *vicious credit system* has borne its bitter fruits in more than one "financial crisis" since.

The opening of the Wabash and Erie canal in 1841, introduced a new stage of agriculture. It opened a line of transportation by

which grain could reach the eastern markets from central Indiana, and pork could go to Europe without passing through a semi-tropical climate on the Mississippi route. This new line of transportation gave an impulse to wheat farming, which directly spread beyond the regions accessible to the canal. Considerable quantities of wheat were taken by wagons from the central counties of the State and sold at Cincinnati, Lawrenceburg or Madison, at a price ranging from thirty-five to fifty cents per bushel; yet it furnished a little ready cash at a season of the year when that article was very scarce. This broke the *monotony of hog farming*, and was the initiative step in our progress towards a diversified agriculture.

With the introduction of wheat as a market crop, came the reaper, the separator and the wheat drill in succession, and thus, in a few years, the manual labor necessary for the production of a wheat crop was reduced fully one-half. Between 1830 and 1850, greater improvements were made in plows than had been made in the preceding 500 hundred years. These improvements, made thorough cultivation a comparatively easy task. With these increased facilities of production, the great need of the country was easy access to a reliable market. But this did not long remain an obstacle. The year 1850 may be set down as the *epoch of railroads*. From that period, the facilities of transportation rapidly increased, till Indiana, from being one of the most inaccessible of the States, became noted for its commercial facilities. The comparatively level surface of the greater part of the State, invited to railroad construction, and the fertility of the soil and its adaptation to the profitable production of a wide range of crops, insured the success of the enterprise.

After the railroad experiment had proved a success, there was but one obstacle in the way of Indiana reaching the foremost rank as an agricultural State. The level surface, which made railroad construction so easy, too often left the fields saturated with water for weeks in the spring, and even sometimes in the summer, thus delaying cultivation and rendering the crops uncertain. Indeed, much of the best soil in the State was unfit for cultivation on account of imperfect drainage. Open ditches had been made in some places, but these, having but little fall, soon became choked with weeds and grass, which rendered them useless. A few covered drains had been made with wood as early as 1850, but these proved but a temporary remedy for the evil, yet their efficiency, while they lasted, suggested the possibility of a permanent remedy. That remedy came with the *erection of tile factories* in 1855. Since that time, tile drainage has been extensively employed in reclaim-

ing much of the best soil of the State, and we need only to persevere in this good work to double the productiveness of large districts of the best land we have.

The introduction of railroads has greatly diversified our farming and increased the number of our marketable crops. From being limited to hogs and horses as the only means of converting our surplus labor into money, as was the case fifty years ago, we may now select almost any crop we choose, and we will find a ready market for it, and generally at satisfactory prices. In 1848, when Hon. Henry L. Ellsworth suggested the possibility of *exporting corn and meal to Europe*, the project was laughed at as visionary and wholly impracticable; but to-day we place not only corn and meal, but fresh meats and perishable fruits in foreign markets with profit. The dairy and the poultry-yards now furnish a greater cash value than did the pork market when it was our sole reliance for money. Potatoes, which were once a garden crop, are now quite largely cultivated and profitably marketed. But a few years have passed since fruit was raised only for domestic consumption, and now both small fruits and orchard fruits are an important factor in the cash income of our people.

But railroads, opening avenues to market, are only one of the elements of our unparalleled advance in agricultural prosperity, though an indispensable one. The inventive genius and mechanical skill which have given us the almost perfect implements and machinery of the farm, is an important factor in our progress. Even this would have availed nothing, but for the intelligence and energy of our agricultural population. To our *system of public schools*, then, we are primarily indebted for the rapid progress which Indiana has made in the improvement of her agriculture. Intelligent labor is quick to see the advantage of every proposed improvement, and ready to adopt those which conform to the dictates of an enlightened common sense.

Though we owe much to our railroad system which has opened up to us an easy access to foreign markets, yet it is a grave question whether carrying the crude products of our farms to a distant market and receiving in return the manufactured articles which we annually consume, is indeed the best thing that can be done. The power and labor expended in transportation adds nothing to the intrinsic value of the articles transported, though it often doubles their commercial value. Now this cost of transportation falls on somebody, and must be paid; and whether it be the manufacturer who eats our food at the other end of the line or we who wear his fabrics at this end, who are the losers, still it is sound policy to save it when practicable. No country excels Indiana in manufacturing fa-

cilities, and all that we consume can be manufactured as cheaply at home as any where else. Then why not make them here? What the best interest of our agriculture now demands is a manufacturing population sufficient to consume our agricultural products. Let them transport, in a concentrated form, the surplus of their labor and skill, and pay the money thus obtained to us or our agricultural products.

FORESTRY.*

BY PROF. C. L. INGERSOLL, OF PURDUE UNIVERSITY.

My apology for presenting some facts and thoughts upon this subject, if any be needed, is found in the following quotation from the report of the Bureau of Statistics: "Timber is too abundant; not more than one-half the tillable soil has been reduced to culture, according to assessor's returns." The thought occurred to me that there might be a little mistake in regard to the statement as set forth, and this has led me to look over the ground somewhat in the light of the best material at hand, in the form of reports, statistics and addresses, in order to see if all shared in the same degree this secure feeling in regard to the number and value of our forests. In looking farther, however, I find that the following note is appended to Table XXXI., on page 219. After some computations in regard to the number of years required to saw the standing oaks in the State, this authority says: "But however distant these figures (108 years) may seem to put the timber famine, the rapidity with which a much less population has consumed and destroyed the 65 per cent of the timber once existing in the State, warns us not to wantonly waste what we have left."

Not being well acquainted personally with the timber resources of our noble State, I have taken a few extracts from various sources to show the feeling in a few localities in regard to supply. Mr. M. B. Kerr says that in the hill country along the Ohio river, the lands, if the timber had never been cleared, would yield a much greater income than as now tilled. "Many of the farmers of Dearborn county," says he farther on, "are now suffering great inconvenience from want of timber. The few isolated patches of timber now remaining on the farms have been culled of the best trees until they are of but little value except for fuel, and are so thin that they afford but very little resistance to storms, and are rapidly disappearing from being blown down and dying of wind shake." Of the "Chestnut oak," as it is called, (*Quercus castanea*), a report in the Geological Survey, 1874, p. 105, says: "This species of oak

*An address delivered before the State and Delegate Boards of Agriculture at their annual meeting January 4, 1881.

grows only on the rich brown loam of the highest hills, (Brown county), does not survive in the valleys, and with the present wasteful consumption, will soon cease to exist." In 1869 report, p. 195, of Franklin county, is said: "This county was originally covered with a magnificent forest, comprising most of the hardwood timber trees of this latitude. A little more than one-half of the lands have been cleared, and are now under cultivation, and in the remaining one-half, a large amount of the best timber has been sawed into lumber or made into staves, so that good timber in the county is comparatively scarce, and is becoming more so every day." In 1875 report, p. 131, Huntington county is mentioned as follows: "This county was originally covered with a fine forest, but clearing the land for farming purposes and the conversion of trees into lumber, have greatly reduced its area and stripped it of many of its finest representatives." On page 177, the forests of Jennings county are spoken of as follows: "These forests have, as a general thing, been stripped of their best timber. The white oak, (*Quercus Alba*), has been extensively cut for staves, the upper parts of the trees being left to decay on the ground." From Dr. Owen, we have the following, in regard to Posey county: "Within the last fifty years the springs have very much dried up and the surface water runs off much more rapidly, so that we suffer from drouth in various ways more than formerly. The wind, too, has a greater sweep, and hurricanes have been more frequent, with consequent injury to grain as well to the timber left. Few experiments in forest planting," says he, "have been tried." Report 1875, p. 201, Ripley county: "The cutting of white oak for staves deprived these forests of their best timber, yet some groves of wood which have been preserved, bear testimony to the large and abundant growth of the primitive forests." P. 295 says: "The forests of this (Vanderburgh) county * * * afford one of the greatest sources of income. The sales, direct and indirect, credited to the forests, amount annually to over \$4,000,000."

Mr. L. J. Reyman, of Washington county, says: "Our most valuable timber is the poplar, of which about eighty per cent has been used. Next in value is black walnut, of which about eighty-five per cent has been disposed of. Of the oaks, about seventy per cent has been used; and next the hickory of which half remains. Of the white and grey ash, eighty per cent has been used, as has been nearly all the wild cherry. Of the sugar maple four-fifths has been cut off for lumber and cord wood. In addition to these testimonies we have the personal experiences and observations of many of the good observers in these and other counties, who all speak of the grand old forests that *were*, but now almost wholly or at least in

great part have ceased to exist. The still hunt that is being made, and the quiet bargains concocted, in black walnut timber only hasten the day when Indiana shall cease to furnish to the factories of the world her quota of this valuable product."

DEMANDS ON OUR FOREST.

According to the best information we have, in regard to the amount of forest yet untouched, only 35 per cent. is left; and undoubtedly much of the finest timber for special purposes has been culled out of this, and already disposed of. The first great demand made on our forests is for fuel; and although we have no adequate statistics to show how much is consumed in this way, yet we know that the great majority of our population of over 2,000,000 burn wood in greater or less quantity. It is true that Indiana, from her great natural advantage of lying partly in the Carboniferous strata, has vast coal fields which furnish fuel for cities quite largely and for our numerous manufactories. If families average five, and over the State during the winter season they average two fires, we should have 800,000 stoves consuming fuel constantly for six or seven months in the year. If each fire burns but four cords during that time, we should have over 3,000,000 cords of wood consumed in this way alone. I believe, however, that this estimate is entirely too low if the facts could be ascertained. The next great demand on our forests is found in the call for fence material. During the early years of the State, much of the forest was used for the building of the fences, and the improvident, not to say wasteful use of the timber for this purpose, in many cases has been proverbial, especially in the construction of the old "worm" rail fence.

The bills of expense paid as a direct tax by the present generation are vastly greater than we imagine. This State has an area of 21,637,760 acres, exclusive of ponds, lakes, etc., which would make 270,472 lots of 80 acres each. To fence three-fourths of these would require 152,140 miles of fence. The roads, where these would border on the same, would require an additional fence on one side, which would add to the above the sum of 56,202 miles. Then we have 4,819 miles of railroads, which, fenced on both sides, will require 9,638 miles of fence, making in all a grand total of 213,161 miles of fence to be supported and kept up. Undoubtedly this estimate is too low, as many farmers' fields are fenced smaller than 80 acres, and we have the fences of small lots contiguous to and in our towns, which will help to swell the aggregate. Taking this number as the true amount, and assuming that the fences, in good part, have to be renewed every twenty years, we have 10,658 miles of fence to be built every year. We know that with some varieties

of timber we may have fences or posts last more than twenty years, but taking the State as a whole, and the many varieties used in fence or as posts, we feel safe in saying that in the aggregate nearly 10,000 miles of fence have to be built annually to maintain the present system of fences. When we add to this the amount required to fence the lands which each year are being added to the list of tillable lands and woodland pastures, we can see what a draft we have in this direction on the remaining forests in this State.

There is still another call which is no insignificant one, and which will be felt more and more as time rolls on; I refer to the use of wood for railroad ties. We have mentioned the fact of the existence of 4,819 miles of railroad in our State, and we would respectfully suggest that the end is not yet. There are other lines being built, while others still have their corps of engineers running surveys of lines for future construction. These make an incessant demand of timber for ties. In the Report on the Forests of the United States, 1877, by F. B. Hough, p. 116, several railroad companies have made reports in regard to the value of timber of different varieties for ties, and the length of time such will last, also prices paid, etc., etc. One of the most full reports was made by the Erie Railroad, which owns, has leased, or operates, in all, about 950 miles of road. From this report we find that the average life of a tie in the main track, in all its divisions, was eight years for those of the first class; six years for those of the second class; and four years for those of the third class. The timber is classified as follows:

First Class. Second growth of chestnut, white oak, burr oak, rock oak, yellow oak, black locust, and mulberry.

Second Class. Butternut, cherry, red cedar, white cedar, yellow cedar, cypress, black elm, rock maple, black oak, pitch pine, and black walnut.

Third Class. Black birch, chestnut, northern cypress, red elm, white hemlock, soft maple, red oak, tamarack, and yellow pine.

I have been thus specific in giving this list, as this comprises a majority of the varieties found in this State and used for such purposes.

If, now, these classes of timber are used in equal proportion, the average life of the ties would be the mean of eight, six and four, which is six years. We know, however, that the railroad companies purchase more of the better classes of timber, so that for our purpose we may assume that seven years is the average life of a tie in our climate. The same tables show us that in nearly all instances the number of ties used per mile is about 3,000. This gives us approximately the data for computing the demand of our railroads on

our forests. In a very short time the number of miles will have reached 5,000, and reach into nearly every county of our State—(only seven without railroad at present.) This calls for 15,000,000 ties with which to make and keep up a road-bed. The average life of the tie being seven years, one-seventh of this number will have to be replaced annually, or at that rate. This gives us the small number of two and one-seventh millions ties as an annual draft on our forests, with a liability of increase.

Beside this, we have various manufactories calling for special varieties of timber, as black walnut for furniture, oak for staves and all kinds of cooperage, timber for wagons and carriages, etc., These industries, according to our Bureau of Statistics, use up about four and one-half million dollars' worth of raw material, excluding building material, and this is a direct draft on our forests, while the same authority gives twelve million dollars as the lumber business of the State, based on reports from our saw mills.

With our population increasing at the average rate of $2\frac{1}{2}$ per cent per annum, these demands will increase; and with a diminution of our vast pine forests, there will be greater demand for the lumber of other trees. According to good authority, the lumbering in pine in Michigan will be over in twenty-five years. By this time it will have nearly ceased from the upper Mississippi and Wisconsin rivers. When this occurs, and the smaller fields in New England, New York and Pennsylvania shall have been used up, what pine we have will necessarily come from the South, unless those States develop so as to deplete their rich treasures as rapidly as at the North, which is more than probable.

Some persons, however, in looking on the brighter side of the question, will see that in the near future more coal will be mined and used for fuel. Barbed wire will play an important part in all fencing operations, or laws may be enacted, as in some parts of the east, compelling farmers to fence the stock and not the crops; that some substitute will be found, as time progresses, for railroad ties, and more of our furniture will be made of iron. This all may be, but we can only see in this hopeful side of the picture a short delay of the inevitable.

"But," says one, "that is looking at things quite far in the future. to talk of a timber famine in twenty-five to fifty years hence." We must not look at this matter as individuals, but as a State—as a nation. The life of the individual is short, but the life of the State, of the nation, with its vast array of interests that do not stop with the present or the near future, but reach on into the cycles of the centuries, are of vastly greater importance, and in their importance swallow up the individual.

There are other reasons which present themselves and admonish us to be careful how we destroy our forests. The variations of climate incident to the opening up of a country to the sweep of the winds, and the direct sunlight by which rapid evaporation is assisted, clearly point to a limit beyond which we may not pass, and toward which we ought to approach with caution. If we heed not the voice of prophets who tell us of the danger; if we listen not to the lessons on the pages of history, long will be the time in which our posterity may lament in "sackcloth and ashes." Mr. M. C. Read, in an essay on "Forest Culture" in Ohio, says: "If the cornfield is destroyed it can be restored in a single season, but when the forest is destroyed a hundred years are required for its full restoration, and a proper percentage of forests is essential to the best returns from the arable and pasture lands. The lowest amount required to secure the best agricultural results from the rest, is estimated by Marsh at 25 per cent."

If this be true, and we have only 10 per cent. of our forest to spare, is it not high time that something were done to prepare ourselves for the changed condition of things? Go with me, if you please, to some of the countries of Europe and Asia, and read there the silent admonitions stamped by the absence of woodlands for centuries. In 1873 Herr Gustave Wex, in Europe, published a paper relating to the diminution of water in wells and streams, and the depth of water in rivers, which he ascribed to the clearing off of forests. He presented long series of annual observations made by river-gauges, tending to show that the *volume* of water had sensibly decreased in the period covered by these records. The rivers observed were the Rhine, Elbe, Oder, Vistula and the Danube. He also ascribed to the forests the power of condensing mists and clouds, and in certain conditions of forming rains, partly by their cooling effect and the circulation of air, which differences of temperature occasion. This paper excited much comment, and in consequence, its author asked for a commission from the Imperial Academy of Science, at Vienna, to investigate its facts and statements. After several sessions, and a thorough examination, they reported as follows: That the decrease in the depth of rivers in mean and low stages is due to a diminution in the amount of water moved annually, and that this was caused by a failure in the yield of springs and swamps. That the causes for this are—

1. A less amount of watery precipitation per annum from the clearing of forests.
2. An increase in the amount of evaporation from these causes.
3. Changes of the earth's surface, which, instead of retaining the water that falls and allowing it to penetrate the soil, cause it to flow

off rapidly, thus causing high water for short periods, often followed by droughts of long duration.

This subject being brought before the Royal Academy of Sciences at St. Petersburg, a commission prepared an elaborate paper, in which, as an example of warning, Palestine, Persia, Greece and Spain were each in turn cited as now suffering extremely in consequence of the devastation of forests. Southern Russia also is mentioned, in some parts of which existed large forests 150 to 200 years ago. These have been changed to naked hills and plains, and the population been forced to leave the hills and settle in the valleys. It is said also that the forest around the sources of the Volga and Dneiper have become so cleared that high water reaches points never before attained while these were standing. Report on Forestry, 1877, pp. 294-7.

In addition to the proof given above, there are several authorities which seem to show more or less conclusively that the country denuded of forests is more subject to wind-storms, cyclones, electrical phenomena, hail-storms, etc., and even in the reports on several counties of this State made by persons in the geological surveys, this observation is often noted. In this country we lack the data extending over a series of years from which to draw conclusions as can be done from the work and observations in older European countries. We hope to accumulate it rapidly now, as our war department with its signal service, if it is of little practical value to agriculture in every day work, is laying up a fund of information in regard to rainfall, evaporation, height and flow of our rivers, and temperature, that will enable us to tell in a short time, something in regard to these great problems which so affect our future weal.

Perhaps the most complete memoir on forests is that of the renowned French scientist, Mons. Beequerel, a man who for more than forty years was an active member of the Academy of Sciences, in France, and who died in 1878, at a ripe old age.

In the Atlas Meteorologique de l'Observation Imperial, 1867, appears the following conclusions, in which he differs in part from the authority previously quoted:

1. Great clearings diminish the quantity of living waters that flow in a country.

2. It can not be said that this diminution is caused by *less annual rainfall*, or to a greater evaporation of rain water, or to these causes combined, or to a new distribution of rain water. In other points he agrees, differing only in the one just given. According to Dr. Warder, of Ohio, and others who have made this matter of For-

estry a study, the amount of rainfall is not decreased but is not retained; as the cleared fields facilitate the passage of the water into the streams and water-courses, from whence they reach our great rivers much sooner than they would if the lands were in their primitive state and covered with forests.

Leaving this part of the subject, then, for your further consideration in private, should you choose to pursue the line of investigation further, this brings me to the *two* great questions for us as agriculturists to decide.

1. Has the time arrived for us in Indiana to commence forestry—planting and preservation of trees for timber? and,

2. If so, how shall we best proceed in the premises to husband the resources at our command and make investments for the future?

To the first question we would answer that we firmly believe the time has arrived when the farmers of the State should begin the raising of forests and the more careful preservation of those which remain.

The unbelieving may question the practicability of such a proceeding, but we believe most thoroughly in being forearmed. Forests are not reared in a day. It takes time, and if we would be wise in time we should begin that which will be of so much value in the future. In European countries we have a department of the government devoted to forestry, and although people are in the main left to care for their own, yet the government interferes when men wantonly destroy their forests.

The governments have, in some instances, been obliged to go to great expense to prevent incursions of the shifting sands on the coasts, or to cover the naked hills with that which so affects and equalizes the climate.

PRESERVATION OF FORESTS.

The first question for us to consider is the preservation of the forests. This may be best accomplished by keeping stock out of our timber lands. It is a mistaken idea that we can utilize our woodland pastures and produce good crops of forest trees at the same time. We must study nature. In doing this we find a growth of bushes, some of which never reach any great size. These, with the larger trees, casting their leaves annually, are of service in producing a natural neucli which helps to hold the rain-fall. To these are added from time to time the broken twigs, partly decayed—nature's way of pruning.

If, on the contrary, we clear out all under brush and small trees, and allow a firm turf to occupy the ground, we have *not* the requisite conditions for good growth and best results.

Fires *must* not be allowed to run over tracts of timber, as this often does immense damage, even if the fences are not destroyed and the large timber seemingly unaffected. We must protect them as carefully as our meadows and crops.

PRACTICAL FORESTRY.

The definition given for this by C. Y. Michie, Forester, Cullen, Scotland, is one very applicable, and I like it. "It is," he says, "the growing of the greatest quantity of the most valuable wood or timber in the shortest period of time." This latter clause is very important, for says he, "if one forester can grow a crop of trees as valuable in fifty years as another can grow in sixty years, then ten years would be thereby gained, which would represent one-sixth of the producing cost."

By practical forestry, we understand the planting of trees in solid phalanx over certain defined areas. We have the planting of belts for shelter, called "sheltering forestry." Planting of hedges and ornamental groups—"ornamental forestry;" the planting of a primitive shrubbery and propagation—"experimental forestry." These latter have been practiced to some extent in portions of our State. But the former is the part which we are now advocating, and hope to see begun.

The question arises, what shall we plant? There are so many genera kinds of trees and varieties of each that the matter is very much simplified when we know that the number of species adapted to any one soil and locality is comparatively few. Prof. Brewer, of Yale College, in Walker's Statistical Atlas, says that in the United States we have only 300 indigenous species that in full growth reach thirty feet in height, and in the region including our own State we have but sixty to sixty-five species that reach fifty feet in height. Different species are found on different geological strata, so that in connection with the question "what to plant?" we may profitably consult our geology and original forest growth. Other species may do well, but we must prove them before trying them extensively. Our original forests have furnished excellent timber of white, burr, red and yellow oak, two or three species of ash, black walnut, chestnut, etc., etc., each of which, if planted well and cared for would, in a comparatively short time, furnish timber for many purposes. Then, we have several species of coniferæ, as pines, spruces and larches, each of which has been tried in other countries, and somewhat in this, and have done well. These could be tried on soils not too fertile, and will succeed. Larches especially will grow almost anywhere. One man in Nantucket planted 10,000 in 1877. The locust has been tried and does well; but best of all, perhaps, is the

Catalpa speciosa, or hardy catalpa as it is known and distinguished from *bignonioides*, which is much less hardy, and of which it is a variety. In lower grounds elms, and even willows, might be planted with profit.

HOW TO PLANT.

If you are to start your wood from the seeds, a little preparation is necessary. The soil should be very much like that of the woods (leaf mold) and the ground well shaded by means of lath or other screens. This is especially the case with all the coniferæ, and about the same conditions are needed if we take seeds of maples, ashes, etc., those varieties which have somewhat small and winged seeds. If we take any of the nut-bearing trees, we must, of course, place them where they will freeze, as under two inches of soil on top of the ground. Acorns can be planted as corn is planted, care being taken not to plant them too deep—two inches is plenty—or they can be preserved by packing in sand or leaf mold over winter, sprouted and then planted out. According to English foresters, it is better to plant them where they are to grow and then no check is given to their growth. Seeds of elms and maples ripen in June, and may be planted and make good growth the same season. As a rule, these should be planted in nursery rows or beds and transplanted after a season's growth. In transplanting, from 2,800 to 3,000 plants should be used per acre; and, as a rule, men usually err by making the plantation too thin; 4x4 gives 2,722 plants per acre; 3x3 gives 4,840 plants per acre. Professor McAfee, of the Iowa Agricultural College (lately deceased), prefers 3½x3½ as best for many varieties, especially the cottonwood, so largely planted in the west. All trees should be thoroughly cultivated for the first three to five years, and some slow growing varieties perhaps longer.

Dr. Warder, of Ohio, in an address on "Grouping in Forestry Plantations," has given a series of points that are to the point; and as they are from such eminent authority, I produce them here. They were given to Iowa men, but will apply equally well in Indiana.

"1. Never attempt to set out a grove until the ground is well prepared.

"2. Plant your trees or cuttings thickly and all at the same time.

"3. Plant only hardy trees; * * * cheap trees, if you choose to so call them.

"4. After these hardy pioneers are fairly started, and when they have begun to make a shelter belt to the windward, you may stop this cheap tree business, and plant something better.

"5. After your shelter belts of cheap trees have become shelters, but not before, you may indulge in the luxury and comfort that will come from the more expensive evergreens."

Without burdening your patience further in details, let me say in general, that he recommends the grouping or schooling of the different kinds, although in some cases he would have mixed plantations.

TREES FROM NURSERIES FOR SALE.

In Europe, some men take a contract to furnish and set the trees at a given price per acre, and tend for two or three years—£5 10s. per acre in Scotland. H. and Ag. Report, 1878, p. 211.

HOW TO TRAIN.

How should we manage our young plantation? This has been one of the great problems, and is unsettled, as yet, for all varieties and locations. The trimming, pruning and thinning must be managed with care. Some need more thinning than others. We can, however, severely injure a plantation by neglecting it and then thinning too much at one time. Better commence early and work gradually, carefully noting the results. Too much air and sunlight admitted at one time are detrimental. An example of this kind is given in the Highland and Agricultural Society's Report for 1876, in a prize essay on "Thinning Plantations as Applicable in Practical Forestry." The plantation was principally of Scotch pine, with a mixture of some larch and spruce and a few hard woods. In this case, after thinning, the trees lost their natural dark green color, and assumed a faint light green. The leaves became shorter and presented a clustered appearance. Some foresters said it needed more thinning. Some thought it blighted by some atmospheric influence, and others said it had attained maturity and ought to be cut down. "After weighing all the arguments, and duly examining the whole case," says the writer, "I came to the conclusion that the thinning, and thinning *alone*, had done the mischief."

Another plantation is mentioned which was thinned at thirty-five years' growth, and had not been thinned during the preceding fifteen years. After thinning it became sickly and death-like, and but for the important place it occupied in the landscape would have been cut down; after the fourth or fifth year it began to assume its natural color, and is now (1876) in a fair state of health. The larch seems to be an exception to the rule, and where it has been extensively grown, as in Scotland and some parts of England, stands thinning with impunity; so with many of our soft-wooded trees.

Thinning for profit should not be practiced; but, on the contrary, one ought to make all he can from the thinnings. Cull out the weaker and poorer specimens, and now and then a stronger one

where it encroaches too much upon its neighbor. You may think that Nature will attend to this matter better than you. Better anticipate Nature a little, and thus help the matter along. Every year gained is money in the pocket of the producer.

RAPIDITY OF GROWTH.

Under this head, I can do little more than to give you some experiences of those who have been in the work for some time. Let me say, however, that timber can be grown to a fair size much more quickly than men generally suppose, and especially if the best of surroundings are given. Prof. Budd says that the ash, when twelve years old, will, with proper culture the first four years, make a grove of 1,200 per acre, averaging eight inches in diameter, and that by cutting the stump close to the ground and plowing a light furrow on each side, a second growth of more value may be obtained in eight or ten years thereafter.

He would plant as thick as corn, and at the end of six years take out each alternate row, north and south, and at the end of ten years each alternate tree in the remaining row.

The following table shows the growth of several specimens exhibited at the Centennial, from Iowa:

Species.	Age (Years.)	Av. Annual Gain in Diameter.	Diameter.
<i>Acer dasycarpum</i> , (silver leaf maple).....	9	0.97	8.75
<i>Negundo aceroides</i> (ash leaved maple).....	9	1.00	9.00
<i>Larix Europææ</i> (larch).....	9	0.46	4.13
<i>Ulmus Americana</i> (white elm).....	{ 9	0.62	5.67
	{ 9	0.48	4.38
<i>Salix alba</i> (white willow).....	9	1.20	10.87
<i>Castanea vesca</i> (chestnut).....	12	0.74	8.88
<i>Juniperus Virginiana</i> (red cedar).....	24	0.34	9.25
<i>Juglans nigra</i>	9	0.59	5.37
<i>Pinus resinosa</i> (red pine).....	13	0.54	7.00
<i>Pyrus Americana</i>	17	0.34	5.87
<i>Populus alba</i> (white poplar).....	6	1.48	8.88
<i>Shepardea argentea</i> (buffalo berry).....	12	0.38	4.62
<i>Populus alba</i>	22	1.28	28.50
<i>Populus dilatata</i> (Lombardy poplar).....	10	1.67	19.75
<i>Pinus resinosa</i>	19	0.56	10.63
<i>Pyrus malus</i> (apple).....	33	0.54	17.88
<i>Pyrus communis</i> (pear).....	9	0.60	5.50

This will give you some comparative idea of the rapidity of growth. You are, perhaps, ready to inquire about the catalpa. A correspondent of the Chicago Tribune, only a few weeks ago, gave some interesting notes on this tree which he defines as an "easily-propagated, readily transplanted, rapidly-growing tree, of splendid and characteristic appearance, and of great value for wood."

I pass nearly every day a tree of this kind, transplanted, two years from seed, three years ago. It was once broken off by cows, but is now (June, 1880,) fourteen feet high. This specimen stands by the sidewalk in the street. In cultivated ground a growth of eight feet in a season is not uncommon. A lawn-tree on the grounds of Arthur Bryant, Sr., Princeton, Ill., from seed forty years ago, is nearly three feet in diameter of trunk. I found by counting the rings of a common catalpa, grown in blue grass sod as a lawn, that it had increased in diameter of trunk fourteen inches during the last twelve years. The tree was nineteen years old. Among the rapid-growing trees the catalpa is remarkably peculiar for the great durability of its wood. It is light and rather soft, but resists decay almost equal to any timber known. Fence-posts show little signs of decay after forty years' use. A specimen of wood before me was taken from a log of which there is good evidence of its having lain on the ground during 100 years. Only the outer portions of the log were crumbled away by decay, leaving eighteen inches of sound wood. On the other hand—the only evidence of this kind known to me—some stakes used for grapes, about three and a half inches in diameter, of the common or tender variety, grown in the nursery of the Industrial University, rotted off in two years. These were cut in April, and soon afterward thrust into the ground for the grapes.

The wood is easily worked, susceptible of a fine polish, and of a chestnut-like grain and color. It is said to last longer than white oak for railroad-ties and holds the spike without difficulty."

This being the case, what better can we do than to plant a good part at least of the catalpa, with some of the slower growing trees? Do not despair of planting pines. The *pinus strobus*, or white pines, at twelve years' growth, as reported by D. C. Schofield, of Elgin, Illinois, are thirty-five feet high and six to twelve inches in diameter, and this is not an isolated case. Many others are reported of equally rapid growth.

Granting all this to be true, then where are the "profits in tree culture" to pay a man for investing his capital in such a slow paying enterprise.

Let us say to you that is better than money at six per cent interest, if properly attended to. I will refer you to the opinion of one

of Indiana's honored men, who has served the people long and faithfully. Dr. Furnas, at the recent meeting of the Illinois Horticultural Society, is reported to have said that he could borrow money at eight per cent, buy land and plant trees, and in the end make 400 per cent on the investment. (Chicago Tribune, December 29, O. L. B.)

Without stopping to inquire into the pros and cons of this statement, I will give you the prospective profit of some men who have experience in the matter and report the same. M. L. Dunlap, of Champaign, Illinois, gives the following account with an acre of larch, partly prospective, of course.

To trench plowing.....	\$5 00
To harrowing and rolling.....	2 00
To 3,000 plants.....	30 00
To freight, \$1; spade and setting, \$3.....	4 00
To cultivating.....	4 00
To hoeing the young trees....	5 00
To cultivation five years	15 00
<hr/>	
Total drs.....	\$65 00

The cost of land, interest for six years, taxes on the above account for five years, amount to \$125, making a total of \$190. No labor being required for six years more, we simply add interest and taxes. This gives an amount of \$320. Allowing for a loss of 500 out of the 3,000 plants, would leave 2,500, from which 1,000 can be thinned, making 1,500 posts worth \$320, after paying for cutting. Thus we see that in twelve years the partial crop will have paid for the land, taxes, labor and interest, while we have a crop of 1,500 trees left standing, together with the land. In twelve years more he estimates the timber large enough for railroad ties, when he thinks the land and timber will be worth \$800, counting ties worth fifty cents each. (Ohio Agricultural Report, 1871, p. 55.)

Dr. Warder, in a casual remark before the State Horticultural Society, believes that one could leave no better legacy to his children than to plant black walnut. After a few years the nuts will sell for a remunerative price, and the timber be left for final sale. A gentleman from Illinois corroborates it.

There being little question in regard to the profit, how can we awaken the people on this important question? What are our duties in regard to the matter as societies and organizations? In Europe, on the continent, the matter is reached by the assuming fo

the direction of forestry by the Government. Each country feels the importance of this subject. Laws are enacted regulating the cutting and growth of timber by individuals.

In Scotland, prizes are offered by the society for essays that shall embody experience in several lines of forestry work. These cover a large number of subjects, as [here the Professor read several subjects of prize essays, and prizes offered for reports on plantations from the 1877 Report of the Highland and Agricultural Society.] This matter of societies offering prizes is not a new thing in this country. As far back as 1803 the Massachusetts Society for the Promotion of Agriculture foresaw a scarcity of timber, and in a list of questions submitted to the best farmers of each county, had this one: "Is the growth of wood for timber and fuel equivalent to the consumption in your vicinity? If not, what measures are taken to provide against future scarcity?" Shortly after we find them offering prizes for planting timber and in future reports expressing the hope that the time would soon come when no man would cut a tree from his land without planting two in its stead. The bleak hills now covered testify to the wisdom of this work.

OUR POOR LAND.

In New York the Society for the Promotion of Agriculture, Arts and Manufactures, addressed a circular to farmers in 1791. In it were the following, among other questions: "In parts of the country where wood grows scarce, would it be proper and profitable to raise in nurseries and to transplant, hickory, chestnut, beech, ash, and other trees for fencing and fuel? Or would it be advisable to make hedges of white thorn, prim holly, yew, or other shrubs? And cultivate peat and turf for making fires?" (Report on Forestry, p. 434).

If these men and these societies, in that early day, began to look this matter squarely in the face, before the crack of the huntsman's rifle had scarcely died away from the central part of their State, and while the red men were still in force in the western part, ought not we, as an organization, to begin to stir ourselves when we know the low per cent of timber supply and the rapid increase in consumption? It seems to me that our duty is plain in regard to the matter. Our Department of Agriculture Report, just at hand, is agitating the subject; let us do the same. Let the various societies that are interested in agriculture and horticulture do something. Already our schools of agriculture are making a start, and their professors doing a work that only the next generation will duly appreciate. The Bussey Institute, at Boston, connected with Harvard University, and with Prof. Sargent, at the head of a De-

partment of Forestry, and with an arboretum at hand—the first in the country—is doing a grand work. Our western colleges, in Kansas, Iowa and Illinois, have already done much to encourage tree planting, and in the almost exclusively prairie States their efforts are appreciated and much is being done. The legislatures by passing laws, have done much to encourage the work. Might not our legislative assembly lend a helping hand, if something has not already been done? We have already done some planting at Purdue University. We hope to do more. We shall try to arouse an enthusiasm among our students for this, and thus aid the work. We shall also, from time to time, make careful observations and measurements of different species of trees, so as to give relative growth, etc.

I have before me representative men from a large proportion of the counties of our State. Can not we each do a little by planting a few trees or influencing others to do the same? May we not have *our* Arbor day, as do some of our sister States?

In conclusion, let me urge you to plant trees. Plant! though you may never expect to pluck the fruits, gather the nuts, or garner the timber. Plant! for the influence on our climate. Plant! for shelter from the bleak winds. Plant! for shade for yourself, your children and your animals. Plant! for the æsthetic influence on your family and your neighborhood—for ornament. Plant! of every kind, that some may thrive. In fine, plant! that future generations may rise up and call you blessed. We all plant in faith in the unseen ways of a Divine Providence, if we expect to reap before the close of a single season. Let us, then, increase our faith, and sow and plant, expecting to reap after many years.

In the words of the wise man, I would say: "In the morning sow thy seed, and in the evening withhold not thy hand; for thou knowest not whether shall prosper either this or that, or whether they both shall be alike good."

Time alone, which is the revealer of the secrets of the future in all things, shall show the result of our labors for good.

The essay was well received. Messrs. Lockhart and Johnson strongly endorsing the suggestions advanced by the author, and so expressed themselves in the discussion that followed the reading of the paper. Dr. Stevenson, however, remarked that he had always preached against the preservation of timber to the exclusion of tillible and pasture land, and he was not ashamed to maintain that position now. Many years ago, when he settled in this State, the country was covered with big trees, and where trees grow corn

won't grow, and cattle can't be grazed to any perfection. It was his opinion that the best thing to do was to kill every tree. One or two crops of wheat or two years pasture for stock will pay for all the timber you keep standing there for forty years. The wealth of Illinois depends upon her cleared lands, and not upon the timber. Illinois got rich while Indiana got poor. It was because the former had prairies and had to cultivate her land without even fences about them. Indiana is making some gain, but it is because we are getting rid of our timber.

It will not do to say that it will not rain where there is no timber. We have as much rain now, with less timber, as we had many years ago. With our corn fields like young forests, they probably have the same influence on the weather. You can make more by planting the land in corn and wheat than you can in timber. The corn and wheat will hedge the fields and put an iron fence around them if necessary.

The theories advanced by Dr. Stevenson gave rise to some animated discussion and good-natured cross-firing by the older members present, in referring to early prejudices and life among the timber, which was enjoyed by all present.

EDUCATED INDUSTRY.*

BY DR. LEMUEL MOSS, PRESIDENT OF THE INDIANA UNIVERSITY,
BLOOMINGTON.

I have a few thoughts in my mind to which I should be very glad to give expression. I can not claim any right, except a very remote one, by virtue of any occupation of mine, to address you on the subject of agriculture. What I do not know about farming would make a very much larger book than what I do know, although I remember that, a good many years ago, I did have something to do with farming. In one of the southern counties of this State, in my boyhood, it was my duty, if not my enjoyment, to be engaged in certain practices at least connected with your very honorable work. I was reminded, on coming into the room, in looking at some of the specimens that you have, of a plow that I used to follow a great many years ago. I followed at a distance, my business being to see that three grains of corn were put in their proper places. It was an old-fashioned plow, such as some of you have seen. I have no doubt that some of you could supplement my experience in this respect.

I have been announced to speak to you on "Educated Industry." The subject of education is a very large one, and one that has occupied a good deal of my own thoughts. What do we mean by education as connected with industry? If I can have you carry with you to-day the thought that is in my own mind in regard to the matter of education, I ask you to sum it up in three words. Education consists in Truth, Beauty and Goodness. I am not now speaking of the process of education, but of education as gathered up and summarized in these three words that I have uttered.

Truth! One of the greatest characteristics of culture which can come to anybody is a love of truth. Whatever there may be of truth is worthy of being known. One great part of this which we call culture is to stimulate, strengthen and cultivate the mind of man to know it. The capacities and powers of man are such that he may hope to compass the universe. There is nothing this side

*An address delivered before the Annual Convention of delegates from the Agricultural Societies of the State, January 5, 1881.

of God that he may not know, and God himself, by means of this, he may know; so that we desire, in all departments of instruction in all our schools, to give, if possible, this burning desire for knowledge, this yearning after truth; truth of fact, truth of science, truth of law, truth of religion, truth of everything. When the time comes for the youth, which you have sent to me to watch over, to step out into the wide world, with its trials and competitions, I say to myself: If that young man or woman is going out from here with the thought that he or she has done the work, has completed his duties and finished his education, all the time here has been wasted. If he or she is going out with a burning, longing after knowledge and truth, then whatever else has been done, however little the store of fact accumulated, if they have been imbued with this thirst after knowledge, everything has been done, for the universe is before them.

I am thinking of that in connection with the matter of instruction. I want the plow-boy reared with that thought. His opportunities may have been very meager, but somehow, standing by the plow or by the workman's bench, if he have in him this thought, this desire for truth and knowledge, the universe is his.

BEAUTY.

You have noticed again and again, in the humblest home, in some of our manufacturing towns, perhaps, a little one-story cottage, with only one or two rooms. You have noticed a vine clambering up by the door. You have seen indications that there was a woman's thought and heart and love there, for the beautiful indicated that that home was a delightful place. There is one factor which our political economists leave out of their discussions, and that is, that you must put into the workingman's heart the thoughts of hope, and the thoughts of love, and the thoughts of delight and enjoyment, in that which he has, and that which he can bring about him. It seems to me that we should teach, in some way, that the love of the beautiful is a duty before God; we ought to love the things that are beautiful, and that are so common and so easily gathered about us, so as to make life a charm. There is an instinctive love of the beautiful in man, that may be cultivated, that will make him attractive. I say that is a part of education and culture, that is a part of the unconscious influence that must go out from the teacher in the home or in the school. It seems to me that this unconscious influence that rays out from the teacher is vastly more effective than the highest possible direct influence that may be attempted on the teacher's part.

I want to speak of "goodness" as a part of this thought of education as applied to industry. What is goodness? It is subjection of the will. So that in our training there is not only a training of the brow to think, not only a training of the hand, but there is a training of the heart. The intellect, the sensibilities and the will are to be cultured, so that man may stand disciplined and master of himself, so that he may be possessed with a conception, not only of knowledge and of the attractive, but a conception of goodness, of duty, of obligation, of right. Let us take these three thoughts, that education means a love of truth, a love of the beautiful and a love of goodness, and see how they may be applied to industry. I do not think that we can classify work and working men for our purpose. I thank God that we have no right to speak in this country as they do in Europe of the working classes. There is no working class and no governing class here. I think it is coming to be understood, more and more, that any man who eats the bread of idleness is a pauper, and that industry means industry of the hands or head—it means work. I do not hesitate to say that every calling in life is dignified by the motive with which it is chosen. It takes on dignity and character from the motive which animates and controls the man in his pursuit.

When I speak of industry, I speak of it in a general sense. I say we want our industry educated. We want it to be the thought and purpose and aim of our great commonwealth that our industry shall be educated in the sense in which I have spoken of it, that is, filled with a love for knowledge, a love for the beautiful, and a love for the good. Why should we make it our steadfast purpose, in all our thoughts, in all our professions, to see that our industries of all grades and ranks, shall be cultivated, educated and disciplined?

The first reason is for the industry itself. We are being made aware that we live more and more in a competition for the markets of the world, and for the control of the industries of the world. I do not know what your thoughts may be in regard to the question of free trade, but undoubtedly, sooner or later, the entire markets of the world will be open to all the industries of the world for the purpose of a free rivalry and competition the world over. How is the competition to be decided? Who is to bear away the palm in this rivalry among the industries, for the markets of the world? "Well," you say, "that the industry that is found most sober, most faithful and most efficient will, undoubtedly, in the long run, take the palm." It can not be otherwise. I saw, not long ago, in the London Times, a correspondence with a large contractor. Some one had asked him the question, why it was that he sent to America for his locks. He was buying thousands of dollars worth of locks a year. He said in

answer: "I will tell you why; because I can make my designs and drawings and write out my specifications, and I can send them across the Atlantic to the American manufacturer, and I can find them filled to the letter. I can not get an English manufacturer who can understand my directions." I suppose this gives us a clew as to the direction of things. I ask why American watches are driving out Swiss watches in Switzerland itself? I am led to think that it is by this rivalry of trained and skilled labor that the balance is being decided in our favor. I understand that in this free competition among the industries for the markets of the world, that it is the educated hand and brain that are to bear conspicuously and prominently the palm.

I saw, not long since, a correspondence carried on between the representatives of the British government in China, on the one side, wanting to know why it was that Americans seem to be driving the English out of the Chinese markets in the manufacture of cotton goods. The answer was, that there was more honesty in the American goods than in the British; there was not quite so much fraud in the manufacture, and it was found, even by the heathen Chinese, that an honest piece of calico would wear longer than a dishonest piece.

We know that in the division of labor that is going on around us there is a tendency to make a man a part of his machine. We know there is undoubtedly a depressing influence and a tendency to eliminate the manhood out of him and make him a part of the machine. We must guard against it. The man that stands at the loom, week in and week out, must, in some way, be saved from the absorption of himself into the machine which he is attending. Why? It is for the sake of a better management of the loom itself. There must be no decay of the thinking power. We must save the man, boy or girl from thus being swallowed up by this terrible machinery that is manufacturing our goods and crushing out our lives at the same time. That can only be accomplished by the sweet influence of culture and education.

The second reason why I wish to urge this thought is, that none of us stand by ourselves. We have to cooperate with each other, and my getting on in the world depends almost as much on my neighbor as myself. We talk about the commonwealth of Indiana. Just notice the composition of that term. It is a common wealth. It is a common wealth which we are all called upon to contribute, and the interest is one. One of the most important lessons we have to learn in life is how to work with others. You have noticed again and again, how much difference it makes in your estimate of a man whether he is able to get along with others. A man was

once preaching to his people and he brought in the thought of the impracticable character of a good many people, and he pictured it out in a very striking, vivid way, and then he made the application. He said, "My brethren, I have no doubt that there are a good many of you that the best thing that you could do for the prosperity of this church would be to die and get out of the way." That was characteristic of that man's preaching, and he has been pastor of that church for forty years.

I am reminded of another story that comes to me from boyhood. A farmer got to bragging to a neighbor farmer about his wife; said he, "She is the best woman I ever knew, and the wonderful thing about her is, that she is so good-natured that she never gets out of humor."

"Well," said the neighbor, "I can tell you how to fix her; you just take her a load of crooked wood and see what she will say."

"Well," said he, "all right."

So when the wood was needed he found some very crooked, scraggy limbs and took them up. He deposited the load and the boys cut it up, and he waited for the result. No explosion occurred that day or the next, or the next, and he began to be filled with astonishment. The wood-pile began to give out, and by and by it came to the last stick, and his wife said:

"We have got to have some more wood, and if you have got any more of those crooked limbs I wish you would bring them, they fit around the pots and kettles so nicely."

That is what we want. If men are crooked they should have the right kind of a twist in them, the kind of twist that will fit around things. Therefore, I urge upon you to give serious thought to the matter of education. I ask you to see to it that the youth of your community have the best possible opportunities, and that they be faithfully occupied for the sake of others, in order that they may learn how to live with their neighbors and friends. Let me repeat the thought that I have given you, that we are dependent upon each other for our prosperity and success, and the prosperity of others is dependent upon us. I can not live in a town if there is drunkenness, vice, crime and ignorance, which is the parent of them all. You can not bring into this commonwealth to-day a man of culture and refinement, without its enhancing the value of every acre of this commonwealth; you can not bring here a fountain of vice, corruption or evil influence, without its detracting from the value of every acre of your ground. It is thought and culture that make the corner lots attractive, and that make the country attractive. We must see that there is that love of truth, beauty and goodness among us that will make a man companionable.

There is a third reason. When I speak of educated industry I urge it upon you, not only for the sake of industry and the community, but for the sake of individuals, whose interest is, after all, deepest in this whole matter. You know that the ancients thought, in regard to all relationships of life, that the individual was nothing, that the state was everything, that the individual was to live or die for the welfare of the state. Even the best of ancient writers said, If a child promises on birth to be diseased or deformed or to be a burden on society, expose him on the hillside and let him die. That used to be the thought, and it is very curious to notice that a large number of the great men, the men who have turned the currents of the world's thought and action, have been, in their early life, infants that Plato would have exposed on the hillsides. Take such a man as Sir Isaac Newton, whose infancy was such that it was not thought that he could live, or such a man as John Locke. But we have reversed that; our thought is just the opposite of it. It is to this opposite thought that I ask your attention. The state is for the individual, not the individual for the state. The great institutions of modern society are for the benefit of the individual and for his protection. Take the great interests that the state protects; take the home, the school, the church, and the organization of society that we call the commonwealth, and what are they? They are simply so many instruments for the advancement and perfection of individual man. You have only to find that, in some way, by its influence or action, the home prevents the intellectual and moral growth of the individual members of it, and you interfere by the strong arm of the law. You have only to find that the school is dwarfing, hindering or corrupting the mind and the heart of youth, instead of promoting and advancing it, and you close the school. If you find that the action of the church is such as to injure man, you have such control by the lever of public sentiment and the strong arm of the law as to close the church. If you find that the state, by its organic law, or by its administration, is defeating the one great object for which it exists, that is, the advancement towards intellectual and moral perfectness, you reform the state, and you see at once the truth of the great principle that I am thus endeavoring to present. The idea running all through modern society is that these great institutions of man, established under the providence of God, are but so many agencies for the advancement of the individual. With this thought, how does the grandeur of man stand before us? I am in sympathy with the great Scottish teacher who wrote over the door of his room at Edinburgh, "On earth there is nothing great but man, in man

there is nothing great but mind." With this thought the greatness and grandeur of the individual man is before us. Of what is he not capable?

Speaking of Newton; parents and friends watched over his flickering breath, knowing not what moment it might go out. You think of him again, years after, as he goes from world to world pinning planet to planet, and sun to sun, pinning system to system by his sublime law of unity of the universe, and seeing it in his thought as it revolves in order about the throne of God. What is the difference between Newton, the puny infant, and Newton in his manhood? Why, it is development and education. It is the training of his powers of thinking, and his powers of willing. The poet was right when he said:

"Nature and nature's laws were hid in night,
"God said, Let Newton be, and all was light."

There is in the roughest specimen the possibility of such grandeur of attainment. Have you ever noticed the opening of any of the chestnut burs in your community? Did you ever see some poor, uncouth, neglected son of some widow that lived up some back road, whom you have noticed barefooted, but somehow or other there was something about him that attracted your attention? By and by he comes out, his opportunities are few, his facilities are restricted, but somehow the thing is in him, it is there. The germ is started, and by and by it begins to extend, and this poor boy rises and becomes conspicuous, and he makes his mark. This illustrates my thought that there is in a man that which is worth saving, and developing, and which is worth perfecting by this process which we call educational culture.

I am talking to you about education and the education of our industries; that our laboring men in our shops may have, in some way, introduced into their minds this thought, that they may have all the blessings of that which we call culture. They may have it, and they should have it, for the benefit of their industry, for the benefit of their community, and for the benefit of themselves.

Gentlemen, I thank you for the opportunity you have given me to address you to-day.

On motion, the thanks of the State and Delegate Board of Agriculture were extended to Professor Moss for his able address.

Dr. R. T. Brown.—More than two thousand years ago a Jewish writer said: How can we get wisdom and hold the plow? He called into question the possibility of it, and that thought has lived

along down the centuries until to-day. Why is it that labor on the farm, holding the plow and driving the oxen, is not as honorable and respectable labor as any other department of industry? It never has been, and we complain continually that our boys, if we educate them, leave the farm and go to the professions and other pursuits, and we lose them. You ask why it's so?

There is more downright drudgery, more absolutely repulsive labor in the life of one physician than in the life of a dozen farmers; but yet, it is honorable and respectable, and our young men are crowding into medical colleges. What is the reason? The labor of the physician is educated labor, and consequently it is dignified, and by that we mean that he knows the reason for everything he does. Place agricultural labor on that same plane and it will be as respectable and just as honorable, and men will crowd into it just as they do into the professions now. There is more science involved in raising one crop of corn than there is in the practice of medicine for years. There is more science involved in managing a farm than there is in geology or meteorology. What you want to-day is for the farmer to understand the reason he does everything.

EXPERT COMMITTEES AT FAIRS.*

BY HON. ROBERT MITCHELL, OF GIBSON COUNTY, IND.

"Is it important to have experts as committeemen to pass on live stock at our fairs?" This question will be more easily decided if we will first come to a clear understanding of its terms. Let us inquire, therefore, what is intended by the term expert? Strictly speaking, the word is an adjective, and denotes a quality. It means experience; that is, knowledge obtained by practice. Hence, it is the force of skillful adroitness—readiness. But, then, the word has passed from its general to a technical use, and as such, it expresses a professional knowledge. The doctor is an expert in medicine, the attorney an expert in law, the blacksmith in iron, the carpenter or brick-mason in building. The word is evidently employed in its technical sense in our question, so that what we have to solve is this: Is it important that our committeemen on live stock should be live stock breeders? that is, shall they have experience with live stock? are they able to judge of the horse, the bull or the cow, the hog, the sheep, from appearance, from form, from size, from movement?

There are many subjects of which men of ordinarily good judgment and common sense can express a reliable opinion upon without being experts. Such, for instance, as the weather, various political questions, the quality of a piece of cloth, timber, or the character of a given piece of soil. Then, there are questions on which men of ordinary capacities are incapable of giving us reliable opinions upon, not from any want of intelligence, but solely from the want of information in a particular line—as we say, from a want of experience.

Now, the question is, where does the line fall which divides the province of the expert from the province of the amateur or the man of ordinarily good intelligence? Some have insisted it was the scientific line, and that all subjects that had been reduced to a science were matters for the adjudication of the expert and beyond the reach of the amateur, but this can not be so,

* Delivered at the Annual Agricultural Conven

for there is no subject which has been made the theme of human thought to any extent which does not take on the form of a science. So that the assertion of the scientific line as the boundary, is simply regulating all questions that arise to the expert. The truth is that it is a question not of science, but of precision of exactitude. Some sciences are exact; such as mathematics, for instance. Some are inexact; such as bread-making, which is a department of chemistry, but into which so many unknown elements enter that no certain results can be arrived at. Having determined these preliminaries, we are prepared to answer the question: Is the breeding of live stock a science? Most certainly a large amount of information relating thereto has been collected and systematically arranged. This gives it the rank of a science; but is it not an exact science? Most surely too many factors, and many of them unknown enter into it, for any man to predict a certain conclusion. There it falls outside the province of the expert, but the line of separation is not a broad one, yet is clearly within the domain of the amateur and the man of ordinary good judgment. But it will always be best to select men of experience, men of information, as committeemen. One of the most difficult questions to deal with by the managers of agricultural fairs is the selection of competent and suitable persons to act on committees to make awards upon the various breeds of animals usually to be found on exhibition at our agricultural fairs. Beyond a question, managers of agricultural societies are more severely criticised, and often unjustly, too, for decisions made by committees than any, perhaps all other causes combined, in the management of fairs.

The manner usually adopted in the selection of committees is for the directors of societies to make the selection during a meeting of the board of directors, each one of the directors designating a member of the committee, and continuing to select in turn until committees are filled. As all are aware, this is the system now in vogue, and has been for years. And in my opinion this system has failed to give satisfaction. To illustrate: We will name short-horn cattle as the animals under consideration. Director No. 1 will name Mr. Smith, Director No. 2 will name Mr. Lewis, Director No. 3 Mr. Brown, etc. Director No. 1 is a fine horseman and good judge of horses, with but little experience in cattle, having no special taste for them, hence is not a critical judge; yet he presumes to appoint a suitable person to fill this delicate and responsible position, and not being a critical judge himself, how can he know whether his friend Mr. Smith is a critical judge? He does not know, hence the frequent mistakes that are made. The principle I wish to establish is this: That, in order to secure good committees, where awards will meet

the approbation of the public and intelligent stock men, the person or persons whose duty it may be to make the selections should be expert judges themselves.

Director No. 2 is a fine judge of sheep. Director No. 3 is a barrister, with merely a casual knowledge of cattle, and yet these gentlemen designate who shall act as judges. Can we wonder, therefore, at unsatisfactory decisions frequently rendered by judges selected in this manner? Would it not be better for the superintendents of departments or classes to select the committeemen to be used in his department or class, and in order to do this work properly such superintendent should be an excellent judge; yes, a critical judge of the breed and kind of animals included in his department. This system will place the responsibility on one person; hence his selections will be carefully made, and, as a rule, no person will be appointed to act as a judge who is not personally known to the superintendent as an expert judge. I will here say that in no case should persons be appointed to make awards, especially at State Fairs, who may have friends or neighbors among the exhibitors—not that they would desire to favor their friends or do other exhibitors injustice, but that with their personal knowledge of their friends' animals, with all their best points impressed on their judgment—perhaps in some instances in an exaggerated manner—which would unfit them from doing that justice to other stock on exhibition which they would do were it not for their personal knowledge of their neighbors' stock; therefore the necessity of selecting judges as remote as possible from the exhibitors whose stock they are called to pass judgment upon. I would suggest in the future that our judges of all the various breeds of animals be critical judges—perhaps what may be termed experts.

Under this system, fewer judges would be necessary, one committee being all that would be needed to make awards throughout the whole class, except sweepstakes, and even in this class, provided no animals were eligible to compete except animals which received a first premium in their class. This arrangement would limit the sweepstakes to animals who were first premium animals in their respective classes, and would result in consistent decisions; whereas, under the old system, it sometimes occurs that a second, or even a third premium animal in its class is honored with the first premium in sweepstakes. And this fact deprives premium animals of much of that credit they otherwise would receive. It is evident that the selection of experts for judges, and them to be selected by superintendents of departments, perhaps with the in-dorsement of the President or Secretary of the Board, will give more satisfaction than the old system.

The proposed system will place the responsibility of selecting committeemen on one or two persons, as the case may be, which will result in the more careful selection of competent persons in the future to make awards. These are the convictions forced upon me, after an experience of twenty-five years in the management of agricultural fairs. Whether they are practical and can be put into successful operation is the question.

The following discussion ensued :

Mr. Byers. I have a plan to propose in regard to county fairs, but I had not thought of the State Fairs. My plan was this, that when one county gave a fair, to send to an adjoining county Board, and have them furnish a man to judge horses and one for cattle. I should think that an interchange of that kind could be made between States.

Mr. Lockhart. I am aware that Mr. Mitchell has devoted a good deal of time in preparing this paper, and I think it is one of the most important questions that could come before this convention. I think the best way to do would be to empower the superintendent of each department to procure the judges in advance, and I think they should select experts.

Mr. Johnson, of Martin. It is somewhat humiliating for an Indianian to have to resort to men from other States to get judges. What we want is to get honest men that are far enough removed so as not to be interested parties. I think Indiana has such men, and I think this Board is competent to make that kind of a selection.

Mr. Nelson, of Parke. I have had some experience in running fairs, but I think that, while the State Board may have erred in their selection, the system that they have adopted is, perhaps, as good as any. Mr. Mitchell's suggestion is one that would meet all the requirements, if you had a good department superintendent. If you had a superintendent that had the nerve to stand right up to his decisions, you would have very little trouble about it.

PONDS AND POND WATER,*

WITH REFERENCE TO HEALTH AND WEALTH.

BY GEO. L. CURTISS, M. D., D. D., OF INDIANAPOLIS.

It is a common occurrence to hear people blaming and condemning the ponds of Indiana as the great source of all their sicknesses, pain and bodily ill. Few ever stop to inquire as to the relation of the ponds and pond water to the health and wealth of the State, but by a wholesale denunciation condemn them as the cause of all woes. It is the object of this paper to inquire somewhat as to the facts regarding the character of ponds.

The peculiar situation and configuration of the State of Indiana could not otherwise than give her, in many localities, numberless low spots of ground, which, becoming filled with water, and having no outlet, soon develop into full made ponds. It requires but a few months to elapse for a pond to become full formed with some of the lower forms of vegetable growths and animalcule in abundance, and only two or three years to have large growths of flags, reeds, rushes and willows. The common teaching has long been that all ponds are great cess-pools, breeding sickness, pain, agues and fevers to culminate in an enormously enlarged liver, a sallow complexion or death.

Nearly three years ago, the author of this paper commenced a careful study of pond and marsh water, together with the mud and other deposit at the bottom and on the side of the ponds, and also the vegetable and animal growths found therein. In prosecuting the study there was used a microscope, with such simple home-made apparatus as could be made out of wood, glass tubing and bottles. He had no theory to uphold when entering upon the work, but sought to make original investigations. The search was for facts, and when these facts shall be fully obtained and verified, (for this course of investigation will run through ten years if life is spared.) Whatever theories, laws or lessons are in them will be readily seen. The microscope employed so far has been Beck's Economic, with eye

*NOTE.—Delivered at the Annual Agricultural Convention.

pieces, A and B, and two object glasses of one-half and one-fourth inch, by which a clear flat field of 500 diameters was obtained.

Ponds are collections of water in a basin of earth destitute of an outlet, standing wholly or in part exposed to the direct rays of the sun. A marsh differs from a pond in that it may have an outlet, but the current is sluggish, and heavy grasses, rushes, and generally pond lilies grow profusely within, and water willows line the banks. For ordinary study there is no difference between pond water and marsh water, but in the minute study of the two there will be found some marked differences between some of their animalcule, and some of the lower forms of vegetable growths. This difference, however, has not been quite sufficiently noted to require separate treatment. The two ponds of water will be spoken of under the name of pond water.

Pond water reveals, at different times, a variety of colors. The water is sometimes tinged with a deep green, then a light green, again it is almost or quite blood-red, then a dirty redish, and occasionally it becomes a bright yellow. This is caused by the presence, in great numbers, of infusorial animalcule, and rank microscopical vegetable growths, worthy of the algae. The animalcules are, of course, microscopical, and yet some of them may develop so as to become, under favorable circumstances, visible to the unaided eye, as the water-flea, some species of the eel, water-worm, etc. It is often observed that an immense aggregation of infusorial animalcule may become visible to the eye as a mass of gelatinous substance. The author took a bottle of water, in the summer of 1880, from a pond made by an excavation of clay for brick, south of Indianapolis, and after it had stood for an hour, the sides of the bottle, just at the water line, were covered with a substance like brick-dust. The microscope revealed this substance to be a school of millions of rotifers.

I. VEGETABLE GROWTHS OF POND WATER.

Here may be placed all the multiplied forms of vegetable growths. In the hot summer months, and late in the fall, ponds of stagnant water may be found covered with a green scum, and the water is considered filthy and disgusting. To the unaided eye, that scum is structureless and worthless. But put a portion under the glass of 150 diameters, and it presents a structure highly and delicately organized. After viewing it with this power for a time, increase the power to 400 diameters, and the complexity of the structure is brought out in a beautiful form, never before conceived of. The coloring matter of this substance is mostly a deep rich green, with frequent broken spaces, clear as crystal, through which the

light is freely transmitted, showing the beautiful and intricate structure. This is a vegetable, and has received the general name of algæ, and is very delicately organized. Algæ found in fresh water ponds is to fresh water what seaweed is to salt water. The colorings are as varied; the structure as delicate; the forms as multifarious as seaweed. The kinds of algæ of the ponds are many, but the author would only refer to those he has found and examined.

One of the most common forms of algæ is the *oscillatoria*, found in most ponds and marshes, and called by the boys "frog spittle." It is composed of long "tubular filaments," with sub-divisions or joints, each joint being a cell. In the water its movements are waving and graceful.

The *conjugatæ* is composed of interlocked and intergrown filaments, with two winding around each other, and then separating to wind around others, and these again around others, forming a kind of lock-stitch. In other species there is a net work, the sides joining at their extremities in five and six and occasionally more joints, leaving an open space or meshes of a pentagonal or hexagonal shape. This form seems to be somewhat rare, as the author has only met with it but seldom.

The *confervæ* is composed of slender filaments, but is not found erect like the *oscillatoria*, but always in a prone position. It is dark green, small cells, many-jointed, and sometimes presents the appearance of an internal spiral cell running its whole length. The author has been able to draw out one of these filaments, not more than the one-hundredth of an inch in diameter, to fifteen inches in length. This form of algæ may be found in cold and freezing weather when ice is forming, and is as green and healthy as ever, with millions of animalcule hiding and living in its ample folds.

There are other and even smaller forms of algæ that are as yet unnamed found in many ponds, covered more or less in a gelatinous substance. Some are notched or toothed like a saw, others are furnished with short hooked, spines, and occasionally some terminate in many branches.

Diatonus form another exceedingly numerous class of vegetable bodies in all ponds, marshes, ditches and cisterns. They are unicellular, which, by deposit or in the growth, become siliceous or a flinty matter, and where iron is found in the water there is a trace of iron in their valves. The envelope of each frustule or cell becomes covered with most elaborate and beautiful marking, and consists of two valves or plates, closely applied to each other, like the valves of a mussel, along a suture or line of contact." In shape the valves of the *diatonus* are exceedingly various. They are square, round,

triangular, heart-shaped, boat-shaped, zigzag, palm-shaped, half moon, like the letter S, etc. In color they also present a great variety, ranging through green, red, orange, yellow and gray, being dotted with spots of other colors, which, combined with the delicate markings under the microscope, present an ever interesting object of study.

Diatonous are found in all surface water, running as well as still. The different kinds have been named, until now there are a hundred or more, and still new ones are being discovered by microscopists.

The author has taken ditch water, known to be full of these diatonous, and boiled with an equal part of chemically pure hydrochloric acid for fifteen minutes, then decanted the liquid and again added an equal part of the same acid and boiled for half an hour, and then evaporated a drop of this liquid on a dish, and when placed under the microscope found the diatonous in a perfect state of preservation, cleaned of all gelatinous substance, and showing the markings in the silex as distinct and beautiful—even more so—as the finest engraving by machinery shows on the new bank bill.

A bottle of the same liquid now, after three years, is full of specimens as beautiful and perfect as the day they were boiled in acid.

This characteristic of indestructibility accounts for the immense deposits of fossil and diatonous. It is found that the "mud banks of Victoria Land, 400 miles long and 120 broad, is composed of silicious valves of diatonous." "Under Richmond and Petersburg, Va., is a deposit twenty feet thick." The polishing stone of Blin contains so small diatonous that, in "a single cubic inch, forty trillions are found." In speaking of the mud deposit of pond water the diatonous will again appear.

Among the protophytes is found the "*Colesterium lunula*," slightly crescent shaped, green in color, marked with numerous dots, having at either end hairs, and showing a feeble circulation between the inner more solid substance and the outer covering. It grows by segmentation. These are not more than one-tenth as numerous as the diatonous, and yet they form a very frequent object in pond water.

Besides these are found monads, as "twilight monad," an object infinitesimal, like a single point, and so colored as to be seen in a mass as red or rust-like patches; the "grape monad," so called because there are a number of cells united by slender attachments to a common foot-stalk; the "green-eyed monad," egg-shaped, and furnished with a single cellisem, and the "revolving globe" or "voloox," which appears like a revolving globe filled with spots looking like so many eyes, and by the aid of one and often many cellia, roll

around with strange rapidity through the water. This has been often mistaken for an animalcule.

So much only describes a small part of the vegetable matters found in pond water, the natural home of a thousand and one curiosities as yet undescribed.

The relations of these to health will be apparent. The green scum growing on standing water, and the algae growing so rank in the water, is nothing more than vegetable matter of the most delicate and beautiful organism. It is constantly eliminating from the water the deleterious matters, and thrives on that which would otherwise produce great and deadly sickness. The presence of the green scum or algae may be taken as a sign of healthy water. The diatons assimilate certain elements they find in the water, and by some as yet undiscovered chemical process, use them to the formation of a solid shell, surrounded by a thick gelatinous or vegetable growth. So all vegetable forms found growing in pond water or around the margin of ponds, are constantly eliminating deleterious gases and utilizing them for a healthy and rapid growth. Remove from water all vegetable spores and the growths therefrom, and it will soon become deadly indeed.

In nine cases out of ten, where the pond water is covered with a green scum of algae, the water beneath will be found clear as crystal. The author was riding in the country, with a gentleman of some attainment, when conversation turned upon the unhealthiness of standing water. They were then passing a pond where the water was covered with a green scum. Said the author, "That water beneath the scum is clear as crystal." The gentleman assured him it could not be so. To test the matter, the author took from his buggy a quinine bottle (he goes around with such implements to secure any chance specimen) and plunged it into the pond and brought up green scum and water. The water, held in the sunlight, sparkled like crystal. Had there been no scum growing or no spores of algae to produce the green scum, the water would have presented a muddy or milky appearance.

It may be repeated, that vegetable growths, while in the water and growing, are not unhealthy, and can not be productive of malarial fever or any other disease by any influence they can have upon the air.

The drinking of water charged with any kind of vegetable matter is undoubtedly injurious.

II. THE LIVING ANIMALS OF POND WATER.

Of the fish—for sometimes these are found in pond water—it is not needful to speak. They are large enough to be seen. Some-

times water dogs, frogs and animals of that character become very numerous. The frogs speak for themselves, and require no attention.

Among the largest and first of the animalcule is the water flea, bearing no resemblance to the house flea, sometimes becoming so large as to be seen with the unaided eye. It has a hard shell back and soft legs, arms and feelers. Its movements are rapid. Because of its size it never becomes in any way dangerous to man.

Among the numerous infusorial animalcule are the bell-shaped animalcule belonging to the polyastric or many stomach animals. These have a bell-shaped body, with a single or double row of cillia around the open part, which may be esteemed the mouth, which are endowed with the power of rapid motion, for the purpose of producing currents of water, by which smaller animalcules may be drawn into the stomachs for food. At the other extremity is attached a long cord, generally spiral, yet sometimes straight, which is attached to a stick, by which it is held in place. These microscopic animals are numerous. The author has found them in pond water so that one drop was the home of more than five hundred of them.

The trumpet-shaped animalcule is very numerous in pond water of some localities, also the tree shaped, and the many shaped of the same family.

The family of rotifers or whale animalcule is one of the most numerous. The author has found them of various colors, and so numerous as to give color to the water, and when deposited on the sides of the glass or bowl to seem a ridge of sand, brick dust, or line of paint.

The eels and jointed worms and saracena are also common to all pond water. The eels are about the same as may be so readily found in the "mother" of good cider vinegar, or may be seen in putrid paste.

The euglena almost always has a blood "red eye-speck," and may be readily distinguished by its elongated form, having at one end a cillium, occasionally two or more, by which it moves somewhat sluggishly through the water and among the algae, upon which it seems to feed. This same animalcule the author has found in purulent pus.

The amæba or proteus, a jelly-like unshapely form of substance, the lowest of animal life, capable of surrounding its food and absorbing it, is exceedingly numerous in pond water. The number and kinds of animalcules inhabiting pond water has never yet been determined. New forms are being discovered by microscopists every year, and old ones are being lost to sight, so that the changes of the

inhabitants of the ponds are as great as the changes being wrought among the denizens of the forest. In pond water changes occur by the month. In January, no matter how cold, some forms of animalcule are to be found! Freezing does not kill them. In February there is a slight increase in numbers and forms. In March there is a perceptible increase in algæ, while in April the season of activity sets in. In May the microscopist finds delicate life forms not before observed. Each weed and spear of grass is formed the home of busy animalcules, and in June there are rewards for patience and careful search with the glass that are marvels of wonder. The depths of the ocean can not reveal any more wonderful sights than are now found in any of the ponds. From July to September is the season for the largest animal growth and their most active multiplication. This is true of both animal life and vegetable forms. It is also a period when death is running riot among them and they cease to exist by the myriads, and their carcasses fall to the bottom and mingle with the mud or sediment, there to be entombed. From October to December some forms develop, or rather mature, deposit their eggs in places of safety, to be hatched out a few months hence. This is really the period of greatest death, and most rapid accumulation of skeletons in the mud deposit.

The question now arises as to the healthiness or unhealthiness of pond water, so far as the animalcule or living animal matter is concerned. Whatever of decay there is of animal matter, the gases thereby formed are taken up by the vegetable algæ, diatonus, desmids, etc., and utilized by them for growth, and but a small portion of these gases can ever reach the people who live on the shore. It is not from the gases or vapors that diseases may or can come, since these are caught in their passage before they reach human lungs.

III. THE MUD DEPOSIT OF PONDS; WHAT IS IT?

After a careful microscopical examination of many specimens of mud and sediment, the author finds it to be composed of four principal things:

1. There is some earth that washes into the pond from the sides or banks by the fall of rain.
2. There are remains of vegetable matter, as portions of algæ, the valves of diatonus and woody fiber from larger growths.
3. There are remains and skeletons of dead animalcule that have not been disintegrated since the extinction of life. Indeed, some of these remains are indestructable, and remain for centuries, to become the fossils of future ages.

4. There are large quantities of gelatinous substance, the origin and designs of which is not certainly discovered.

Mud banks that have been for years accumulating, are rich in these deposits, and become a remarkably interesting object of study. This deposit, when removed and spread on the land, becomes a manure of inestimable value. Or when a pond is drained and the sides and bottom are cultivated, it is found to be the richest of land and yields abundant crops.

Ponds, in the constant accumulation of animal, vegetable and silicious deposit, are a source of wealth and not an unmixd evil.

IV. THE RESULT OF DRYING UP OF PONDS.

Pond water, under the influence of the sun's rays, will evaporate. The animalcule then becomes dried, shriveled and lifeless, but not necessarily dead. This dried mud and these lifeless animalcules, together with the thousands of eggs they have deposited in the mud, become dust, and are blown about by the wind, and for days and weeks in summer and fall are the sport of every breeze. These are some of the thousands of motes floating in the atmosphere, and seen so vividly in a ray of sunshine falling into a room through a crack or half-open door. People inhale these. They fall on the food and are eaten. They fall into the water and people drink them. As soon as they come in contact with the liquids of the body anywhere, they are revived, and become as active as ever. They enter the blood, many being indigestible, through the process of absorption by the lacteals, and find their way more or less to every portion of the system. May not their presence account for many of the phenomena of disease?

Take an illustration. The author assisted, in 1879, in an operation to evacuate a cyst in a lumbar abscess on a gentleman at Shelbyville, Indiana. The operation was with a needle and aspirator. The pus was thick, bloody and having somewhat of a faint putrid odor. Specimens were put in two different bottles perfectly clean.

The operation was performed between eight and nine o'clock at night. By eleven o'clock the same night a careful microscopic examination of the pus had been made. In it was found three different forms of animalcule. 1. Vibrous; 2. A very small, quick-moving animalcule about 1-30,000 of an inch in diameter; and 3. Numerous specimens of what appeared like the euglena, so frequently discovered in pond water, moving in exactly the same manner as when in their native element.

What was the origin of these living spots is as yet unanswered.

That the dried mud or deposit of pond water contains animalcules which may be resuscitated or revived, is susceptible of easy

demonstration. The author has taken dried mud from places where ponds have been, but where the water has been dried up for months, placed it in a bottle or dish, and poured over it pure water, and in twenty-four hours had resuscitated as fine a crop of animalcules as the most ardent microscopist could desire to examine. These again have been allowed to dry up, and after weeks been resuscitated again. Prof. Brocklesby, in his "Amateur Microscopist," makes the statement that Prof. Owen revived animalcules after lying dormant for years. Maulett revived the same specimens twelve times, and Spallauzani for fifteen times, but beyond this he could not go.

Thus, after a somewhat careful survey of the subject of ponds and pond water, the author reaches these conclusions:

1. That ponds, as long as they are filled with pond water, are not necessarily unhealthy, and do not breed disease. In all cases of great malarial sickness or typhoid fevers and many cases of diarrhoea in the neighborhood of ponds, the cause of disease is found in drinking the pond water, or the draining and drying up of the ponds have set afloat in the atmosphere immense quantities of animalcules and microscopic fungi, which being inhaled, produces the disease.

2. In case a pond is drawn off or dried up in midsummer or the fall of the year, the cause of disease is the death and decay of the animal and vegetable matter, which can no longer live when deprived of its native element.

3. That the mud or deposit of pond water is a source of untold wealth to the farmer of the future. These ponds are now accumulating year by year, vast reservoirs of rich earth, which will ultimately be drained and cultivated as the richest and most productive lands. Even now, the most productive lands are those bearing evidence of having lain long under water. Indeed, an old and worn out field could be most easily and surely rejuvenated and enriched by being flooded, and remain a pond for a few seasons. It might be sterile when the process was commenced, but after such a treatment it would be rich and productive.

Finally, ponds and pond water are not the unmitigated nuisance the world is generally taught to believe they are. They are not objectionable to health, and are resources of wealth.

REPORTS
OF
COUNTY AND DISTRICT
AGRICULTURAL SOCIETIES,
EMBRACING THE
CONDITION OF AGRICULTURE.

ALLEN COUNTY.

The condition of agriculture in this county is reasonably good. Wheat is getting to be our leading cereal production; a large acreage was harvested the past year. The yield was largely over an average, and the grain of a superior quality. We have had an extraordinary good year for farmers, and if they grumble at the prices they have been receiving the past fall and winter, they will never be satisfied. They have been getting from \$12 to \$14 per ton for hay, corn 45 and 50 cents per bushel. Wheat has averaged about \$1, and other products in proportion. The interest in the growing of improved and thoroughbred live stock is rapidly advancing. We have in the county several herds of thorough bred short-horns and Jerseys, and almost every farmer has some improved and graded stock. We have lately imported five Clydesdales, which will be quite an advantage to our farmers.

W. W. ROCKHILL, *Secretary.*

BARTHOLOMEW COUNTY.

The Bartholomew County Agricultural Society held their twenty-fourth annual exhibition, on their grounds at Columbus, August 31 to September 4. The weather was rather unfavorable, but there was a marked increase in the interest of the fair over last year. Although the receipts were not enough to leave a balance in the treasury, there was sufficient to pay all the premiums and other expenses of the Society. This encourages the association to do still better next year.

Our ground is composed of a beautiful tract of twenty-seven acres, of well watered and shaded land, situated immediately adjoining the city and is held in fee-simple.

The land in this county is well cultivated and produces abundantly. The different branches of the east fork of White river flowing from the north to the south, having good fall and gravelly beds, drain a large amount of bottom lands that are in a high state of cultivation. The uplands are generally well managed. Quite an amount of draining has been done and the good work still goes on.

The crops the past season were not very satisfactory to the farmers; the wheat crop was an average, or above an average, but the corn crop was below an average on account of the drouth, the potatoes almost an entire failure. The acreage of wheat was large; the acreage of corn not so large as usual, but was harvested in good order; the hay crop was the best ever harvested in the county. The drouth through July, August and September was the severest that ever was known in this county. JOHN DOUP, *Secretary*.

BLACKFORD COUNTY.

The Fair ground, containing twenty-four acres, is beautifully located just north of and adjoining the town of Hartford City, the county seat of Blackford county, Indiana, with one of the best half-mile tracks in the State and all the modern improvements, having ample accommodations and shelter for stock, plenty of stock water and good drinking water.

Mechanical Hall and Fruit Hall being filled and well managed were an especial feature of the Fair. But the crowning wonder was Floral Hall, under the direct supervision of Mr. T. P. Van Winkle and his lady assistants. With its wealth of flowers, ornamental needle-work, canaries and pretty girls was enough to almost

convince the writer that single blessedness was not what it "is cracked up to be."

The large and elegant display of fine horses was sufficient to convince the most skeptical that the days of "hoss trading" in "old plugs," would soon be numbered among the "lost arts."

The showing in cattle was large and satisfactory, and the investments made by our farmers in thoroughbreds and graded stock prove conclusively that the most desirable grades of fine stock are rapidly superseding the inferior grades of "scrub stock" so much in use in the past.

The large and splendid exhibition of Poland China and Berkshire hogs and their crosses, together with a fair showing of Jersey reds, are sufficient to establish the fact that the days of the "razor-backs" are numbered, and must soon hunt a more congenial clime.

The showing in sheep was unusually large and attractive, and the business of wool growing is apparently in a great degree destined to supersede all other business with our farmers.

The exhibition in the poultry department, under the supervision of ex-Senator Bonham, was simply "immense," and if the appearance of the many splendid varieties exhibited has anything to do with controlling that department in the future, the expression of Mr. Bonham that the "old barn-yard dung-hill fowl must go" is correct.

The condition of the agricultural pursuits in the county has grown apace with the growth of our association, and the outlook is, indeed, extremely favorable. Our farmers generally use the best of improved machinery, and by and through their active co-operation our last Fair was so much a success that we again propose to try the experiment for four days, commencing September 20, 1881, when our "latch string will always be found on the outside," and an especial invitation is hereby tendered you and your wife, kind reader, to "come and see us." Respectfully,

JOHN NOONAN, *Secretary.*

BOONE COUNTY.

The sixteenth annual fair of the Boone County Stock Agricultural Society was held at the grounds of the association near Lebanon, commencing September 6 and ending September 10, 1880. The weather throughout was good, and the attendance very large. And notwithstanding the fact that there were two other very successful fairs in adjoining counties at the same time, the exhibition

was, in all departments, very good; indeed, fine in a great many. The various classes of horses were numerously represented by the finest specimens. The cattle department was represented by some of the most noted short-horn herds. The entries in the sheep and swine departments were quite numerous, and represented the most fashionable breeds. The display in fine art hall, floral hall, and in the agricultural, mechanical and miscellaneous classes, were the largest and best we ever had.

During the past year the Society erected a very convenient and commodious fine art hall, regraded and widened the time track, and enclosed it with a good substantial fence, and it is now said by turfmen to be one of the best half-mile tracks in the State.

The live stock interest has taken a remarkable impetus in the last year or two, and quite a large number of the best short-horns from Kentucky have been brought here.

There has also been some very highly bred horses brought here resulting in benefit to owners and patrons. The same may, to a great extent, be said of the introduction of the best herds of swine and sheep. And the interest taken by our poultry fanciers, in procuring the best breeds, is producing a spirit of rivalry among our poultry raisers.

The average of our crops this year was good; corn not an average in quantity, but the quality was good; hay crop good and saved in the best condition; oats less than an average crop; clover seed good; barley very good; the fruit crop fair.

During the last year more good gravel roads were made, and more efficient ditching done in this county than in any ten years before. The timber here consists principally of oak, poplar, ash, beech, hickory, sugar and walnut, which is rapidly being cut into lumber and staves, and shipped to market. The proceeds of which, together with the proceeds derived from the sale of surplus stock and farm products, have made money quite plenty and all kinds of business good, the effect of which is rapidly enhancing the value of our lands.

The county is being dotted over with good brick school houses and churches, and good brick and frame farm houses are fast replacing the log cabins of the first settlers.

A. C. DAILY, *Secretary.*

CASS COUNTY.

The eighth annual Fair of the Cass County Agricultural Association was held at their Fair grounds, at Logansport, September 21

to 25, 1880, and taking all things into consideration, was one of the most successful fairs yet held. The weather during the whole time was fine, the entries in the different departments being fully up to the average, and the attendance good.

The number of entries was 1760, and being distributed among the different classes made the exhibition in all the departments very attractive. The amount of premiums awarded and paid was \$2,485.

In relation to the condition of agriculture in Cass county I would say, that we have no reason to complain, but have reason to be thankful, although some of the products of the soil were not as good as could be desired, but everything considered, we have many reasons to rejoice; and for the amount of acres under cultivation the products for 1880 are equal to any county in the State.

The crops in the county for the year 1880 were as follows:

Wheat. The number of acres harvested was in excess of last year about twenty per cent., but the yield per acre was not as large as 1879; but taking the excess of acres harvested, made the yield equal, if not greater, than 1879, making in the aggregate as large a number of bushels as was ever produced in the county; the quality being good.

Corn. About two-thirds of an average crop, but the quality was good, much better than last year. The wet weather in the early part of the season, and the drouth in the latter, being reasons for short crop.

Oats. Not over one-fourth of a crop, and the quality very poor; all caused by the wet weather.

Hay. Both clover and timothy an average crop, and the quality good.

Potatoes. Crop short; hardly an average, but the quality good.

Fruit. The fruit crop was large above the average; quality good.

Cabbage. Like 1879, almost an entire failure, the worms damaging and in some instances destroying the crop entirely.

Other vegetables of all kinds were good and yield fully up to the average.

D. W. TOMLINSON, *Secretary.*

DAVIESS COUNTY.

The past year has been a prosperous one for our farmers, good crops and fair prices maketh glad the heart of the farmer. And these we have had. Although, perhaps, the crops were not so good as in some former years, yet they were about the average. Our

farmers are keeping abreast of the times, and abandoning the "old foggy" ideas of the past, and adopting new ideas and improved machinery. The sale of agricultural machinery during the past year was the greatest ever known in the history of our county. The sale of reapers and mowers alone amounted to nearly forty thousand dollars. Our tile manufacturers are unable to fill their orders, so great has been the demand for tile within the past year. Lands that were formerly thought "too wet for anything," now, by the proper drainage, produce the most bountiful crops. Verily, "the waste places are made glad." This county ranks third in the State as a wheat producing county. There has been considerable improvement in the stock within the past few years.

The second annual Fair of the Daviess County Agricultural Association was held at their grounds, near Washington, September 23 to October 4, inclusive. Our fair was not all we could have wished it, neither in display nor attendance, yet considering the intense political excitement at that time it was all we could reasonably expect. There was a very good display in most all the departments. The racing was especially fine. Our society is in good shape, free from debt and propose to have a "big" fair next year. We have in course of construction another railroad, running through our county, which, when completed, will be of immense benefit to our farming community, giving us direct communication with the South, as well as competition in freight charges.

Peace, plenty and prosperity.

A. F. CABLE, *Secretary*.

DECATUR COUNTY.

The twenty-ninth annual Fair of this Society was held on their grounds adjoining Greensburg, on the 24th, 25th, 26th and 27th of August, 1880, and was a decided success in every particular. The grounds are located east of the city of Greensburg, about one-half mile from court house park, containing twenty acres. One-half of which is finely shaded. The improvements are such as usually belong to such grounds, and are all in good condition. The grounds are abundantly supplied with excellent water. They are owned by the association and are worth about \$6,000.

The exhibition was one of the best ever held in the county.

The departments of live stock, as heretofore, furnished the leading attraction during the fair. Some of the finest show cattle in the State were on exhibition, and the competition very decided,

and to insure fair and intelligent decisions among the "herds" is a matter that requires great care on the part of the management.

Hon. M. E. Ingalls, president of the C., L., St. L. & C. R. R. Co., offered a premium of \$50 for the best short-horn bull, and the competition in that particular ring was exceedingly sharp and earnest.

In sheep, hogs and poultry the exhibit was very fine and large, so much so that to determine the matter of precedence required the utmost care and judgment. The number and quality of the swine exhibited at our fair this year seems to betoken that not much improvement can be made.

The class for jacks and mules was well represented, and the exhibition of mules was especially fine.

In the horse department this fair is like most other agricultural fairs. The horses attract very general notice, and without a good display a fair would be considered a failure. In addition to the many fine specimens in the general purpose, light harness, heavy draft, roadsters and matched rings, the great attraction and amusement centered in the daily competition for the premium in the speed rings. 'Tis true many persons consider these exhibitions as being immoral—a subject we will not discuss. Whether the test of speed has a moral or evil influence, so long as everybody desires to see the races some tests of speed will be provided for at county fairs.

Our receipts were sufficient to meet all expenses, paying the *premiums in full*, and leaving a balance on hand.

The officers for the ensuing year are: William W. Hamilton, President; William Kennedy, Vice President; Frank M. Weadon, Secretary; Thomas M. Hamilton, Treasurer.

THE CONDITION OF AGRICULTURE

in this county is good, and becoming better every year. Farmers are more particular in preparing their soil for crops; it is tilled deeper, and, with the wonderful improvements in all agricultural implements, they are better able to pulverize the ground and keep down the weeds. A thorough system of tile drainage has been practiced by our farmers for years past, and but few, if any, counties in the State can boast of so great a number of rods. It has proved a paying investment to our farmers.

The crops of corn, wheat, oats, etc., considering the season, were good, the yield of wheat being very much better than the most sanguine anticipated.

Experience as well as observation has demonstrated the fact that proper rotation of crops is highly profitable, giving abundant yield and tending to improve the general condition of the soil. As to

the question, What branch of farming is the most profitable? I think public sentiment among our farmers will say mixed husbandry, as it imparts general and useful knowledge, defies general disaster in the fluctuations of trade, and, to the moderate farmer, puts him in a position to select at will a judicious rotation of crops.

FRANK M. WEADON, *Secretary.*

DELAWARE COUNTY.

The Delaware County Joint Stock Agricultural and Mechanical Society held its twenty-eighth annual Fair the third week in September, commencing Tuesday, the 14th.

The exhibition of horses was first-class, and can only say, that for the number of entries the display was never better.

The entries for jacks and mules were not so large as in some former years, but enough to make a good show.

In the several classes of cattle a reasonable good show was made.

The display of sheep was very fine, and a larger number than usual in the pens. Many very fine specimens were exhibited.

The number of hogs was, as usual, about forty or fifty pens; some very fine specimens, Poland Chinas, Berkshires, Suffolks, Jersey Red, and several other classes.

Our poultry show was excellent in quality, but not as large as former years and reflects great credit on those who for pleasure or profit take an interest in the raising of fine breeds.

The mechanical department was never so well represented as this year, there being two engines employed to run the machinery, which was admired by thousands of visitors.

The floral hall was filled with the finest specimens of ladies work. The ladies of Muncie and vicinity deserve credit for their exertion to make a good show each year in the floral hall.

The show of fruit was not equal to last year's exhibit, but was very fine; not easily surpassed by many societies.

Buggies, carriages, spring wagons, two-horse wagons, sleighs, of the finest qualities, were on exhibition.

The speed ring was well represented by fast horses each day; having good stables or stalls, the best half mile track in the State, as we think.

The condition of agriculture in this county is good. We believe that it will rank among the best in the State.

Corn—Did not yield well in consequence of a severe drouth in July and August. The crop is sound, but the ears are small.

Wheat—Large acreage sown; quality very good; average, about twenty bushels per acre.

Oats—Heavy straw, but light in the head; rust hurt them from filling.

Hay—Acreage below an average; crop good and well cared for.

Rye and Barley—None raised.

Potatoes—Rather light crop.

Fruit—Never better.

We paid our premiums in full.

The Fair ground is situated one-half mile north of the city of Muncie and it contains forty-one acres; fence, sheds, stalls or booths, shade trees, four wells of water—every thing calculated to make visitors and exhibitors comfortable during the fair.

Muncie, the county seat of Delaware county, is situated in the bend of White river, has gas works in full operation, two large flouring mills, two machine shops, three carriage shops, one flax mill that works all of the flax straw within reach, besides what straw is shipped here from other counties. The tow is manufactured up in what is called bagging. There are twenty dry good stores, about twenty-five groceries, and some five or six thousand of a population in the city of Muncie.

J. M. GRAHAM, *President*.

ELKHART COUNTY.

The Elkhart County Agricultural Society held the twenty-second annual Fair from the 28th of September to the 1st of October 1880. More than the usual effort was made to interest the people and counteract, if possible, the overshadowing adverse interest caused by the impending State and Presidential elections. We were successful so far as inducing to be present, more and better articles than were ever shown before by our society, but while the attendance was good, it was not equal in numbers to that of the previous Fair. And now, that we have survived the Presidential election, we hope to have clear sailing next year, when the public mind will be more interested in the society and its affairs. The weather, too, the two first days was cold, dry and windy, that all who were comfortable within doors had no desire to seek amusement in the wind and dust. The exhibit entries were 950. Unusual interest was manifested in the fine draft horses, notably, the Norman and Clydesdale breeds, also in the numerous well-bred roadsters and all work horses.

The admirers of cattle had a fine treat in viewing the excellent herds raised by Rippey and Kennison.

The wagon and carriage exhibition of our own manufacturers was the very best feature of the show. The superior quality of the work is rarely excelled anywhere.

The agricultural implement and machinery department was "brim full" and being driven by ample steam power, gave exhibitors very favorable advantages to show the actual working of reapers and binders, and was of much interest to our enterprising farmers.

The exhibits in farm products were excellent—never better at our fair—but still not equal in quality to the great importance that our farm, vegetable and cereal products have in the prosperity of our country.

In the hall the ladies done their part even better than the men did outside; the arrangement for exhibits was not good, yet the superior handiwork of the ladies was conspicuous and a pleasant part of the show. Perhaps the best feature in the hall was the extensive and beautiful show of flowers, despite the fact of no proper accommodations to show them. The numerous and rare plants attracted admirers of the beautiful.

The amusements on the trotting track were fully up to the expectations of those who like to see that kind of sport, and gave entire satisfaction.

It was the aim of the managers to make this Fair so successful that enough of the revenue would remain, after paying premiums and expenses of Fair, to pay for the purchase of the Fair ground. It proved that the lines of exhibits were so full in nearly every department that most all the premiums offered were awarded and paid to exhibitors.

The receipts of the fair were.....	\$2,329 58
Fourteen hundred and thirty-seven dollars premiums were awarded, and of this there has been paid fully.....	1,410 00
Leaving to pay expenses and balance to apply on purchase of ground of.....	919 58
That amount not being sufficient to meet the last installment of the purchase price of the Fair ground, a loan was made in the sum of.....	800 00

And a deed for the Fair ground was made to Albert Osborn, in trust for the Elkhart County Agricultural Society; and so soon as there may be an unquestionable body corporate that will have power to take and hold real estate, Mr. Osborn will convey the Fair grounds to such perfected organization, subject to said \$800 debt.

The friends of the society are now encouraged, and, with good weather for next year's Fair, the indebtedness will be quite or nearly liquidated.

One matter has given the managers trouble—that is, the price of admission. It is essential that it be high enough, so that receipts will furnish sufficient funds to cover premiums and expenses of Fair and leave a margin to apply on debt. Thirty years ago the society fixed the price of membership at one dollar, and that to admit the heads of the family and certain of the younger children by its terms; but this ticket is, in many cases, expected to admit to the Fair all persons of the family and all the guests and visitors thereof at time of Fair, and, by some pretence or other, it is made to cover many more persons than intended, and so the revenues of the society are lessened. This ticket ought to be abandoned, and a single daily admission ticket substituted therefor; but the society does not feel strong enough to make the change and adhere to it, so we drift along in old ruts, whereby we are badly cheated in spite of precautions, and we see no way but to keep on with this ticket, at any rate until the society is out of debt.

Those societies who have always practiced the rule of single admission tickets are fortunate, indeed. To us the family or season ticket, with all precautions and guards we have been able to throw around it, results in large crowds at our Fairs, and little money to show for it.

JOHN W. IRWIN, *Secretary.*

FAYETTE COUNTY.

The "Eastern Indiana Agricultural, Mechanical and Trotting Park Association" held its third annual Fair on their beautiful grounds adjoining the city of Connersville, Fayette county, Indiana, commencing Tuesday, September 7, 1880, continuing four days, with satisfactory results, being the twenty-eighth Fair in the county. Never before in the history of Fayette county's fairs was there so numerous and liberal premiums offered in the "textile fabric class," nor so much interest manifested by the ladies, the result of which shows conclusively that that class has been neglected, and detrimental to the financial interest of our fairs. The exhibition, in the several classes, though not large, was creditable, particularly so in the agricultural and mechanical departments. Farm machinery being exhibited in motion added greatly to its interests, and should be encouraged. The exhibition of horses, cattle, sheep, hogs and poultry showed improvement, but not so marked in the horse department, being evident that the introduction of a little more good blood would be advantageous. The agricultural and manufacturing interests in the county were never more prosperous and satisfactory.

A. B. CLAYPOOL, *Secretary.*

FRANKLIN COUNTY.

Our Fair was held September 21 to 24, inclusive. We can neither boast of a very large attendance nor of the financial success of our exhibition; yet we had, in many respects, a successful fair. In excellence of quality the exhibit of horses and cattle has never been equaled in the history of the association. Our liberal premiums attracted to our track many of the best "timers" in the surrounding country. Our hog show was small, but very good.

There are three causes to which we must attribute our small attendance: First. The political campaign, with its excitement; Secondly. The Cincinnati Exposition, to which our people could go at half fare rates and at a less expenditure of money than to our exhibition at home; and last, but not least, the "wheel of fortune," or "pool wheel." We have felt the sting of this *riper* so sensibly that we have determined to prohibit all gambling of every description on or about the grounds, satisfied that the deteriorating influences upon our attendance far outweigh the pecuniary benefits derived from it.

CONDITION OF AGRICULTURE.

Our farmers have been treating agriculture in the light of a science in the last few years. They have learned that the successful husbandman must be an *aggressive, energetic business man*, even more so than the man of mercantile pursuit. By judicious selection of seed—corn and barley, as well as wheat—and rotation of crops, the yield has been increased at least forty per cent. The nature of the soil, its adaptability to particular crops, and the elements necessary to its improvement are popular themes of conversation and study. Bone dust has been used as a fertilizer on growing wheat with marked success. The wet lands in the eastern part of the county are improved by tile draining, and tile are used to some extent in the hilly lands of the western part to prevent "washing." The latest improved machinery is used. About thirty self-binding reapers were sold this season. Most of the grain is threshed early.

The live stock of the county, by careful attention and some expenditure of money for thoroughbred stock, has improved in quality at least one hundred per cent. in the last six years. Our farmers have learned to look upon the proper care of stock, in both food and shelter, from an economical as well as humane standpoint.

The fruit crop on the uplands was excellent. Ten thousand bushels of peaches were harvested in the southeastern part of the county. The apples were not so abundant, but of good quality.

Our highways are receiving due attention. Four gravel roads are in course of construction, and our streams are well bridged, thus affording our farmers the proper facilities for marketing their products.

A tax of two per cent. has been voted by several townships for the construction of the proposed Evansville, Seymour and Bellefontaine Railroad, which, if built, will cross our county from east to west, and open the way for shipping the limestone now lying in vast quantities in the neighborhood of the proposed route.

M. A. MESS, *Secretary.*

FULTON COUNTY.

It is not with any great amount of pride I report the standing of the Agricultural and Mechanical Society for the year 1880. The Society held its annual fair September 15, 16, 17 and 18, at Rochester, west of the corporation limits, on their grounds, purchased in 1871 for that purpose. By reason of the bad financial management of 1879, and the fact of the campaign of 1880 being at its greatest heat, the people of this county seemed to have lost sight of the interests of the society, and the result is that the receipts barely paid expenses, so the indebtedness of the society increased instead of being reduced. The report made in 1879 of the richness of the county and fertility of the soil was very fully stated and, in some respects, slightly exaggerated. The wheat crop of 1880 was not quite so good as in 1879, but full as many bushels, there being more acres sown; corn, perhaps two-thirds of a crop; oats, crop very light; potatoes, scarce; fruit of all kinds very plenty, except peaches. The farmers of this county are becoming quite prosperous, and the society hope to be able to make a more favorable report for 1881.

WM. H. C. CHINN, *Secretary.*

GIBSON COUNTY.

The society held its annual meeting on the 5th day of November, 1880, to hear the reports of the officers for the year then ending, and also to elect officers for the ensuing year.

The president delivered an able address, which was duly received and ordered to be placed on the records of the society.

The treasurer's report shows: Total receipts, \$3,563.65; total expenditures, \$2,957.25; balance on hand, \$606.40. Of the amount

expended \$843.50 was for additional grounds and permanent improvements. The amount paid in premiums was \$1,438.35.

This society is now in a good healthy condition again. During the great financial troubles which affected this country several years ago, the society became involved to the amount of \$1,800. But this heavy load has been lifted off, and now the society is clear of debt and owns over twenty-five acres of ground adjoining the town, with the necessary buildings upon it for the accommodation of exhibitors and guests. Among the permanent improvements made by the society this year may be mentioned a line of shafting for the purpose of furnishing power for the display of all farm machinery which could be attached thereto. The display of self-binders was especially satisfactory.

The society also erected a good building suitable for the show of sheep and hogs—something that was greatly needed, and which gave entire satisfaction to those persons making exhibits in those classes.

This society has ample accommodations in the way of good stalls for horses and cattle, which is furnished free to exhibitors.

It has heretofore been the custom of this society to charge an entry fee on all articles entered for a premium. This year no entry fee was charged, except in the speed ring.

The society has always managed to conduct its fairs so as to furnish accommodations to all persons usually attending fairs with stock, and have offered liberal premiums in the speed ring. Yet our grounds are so situated that it is not possible to furnish more than a one-third mile track without incurring great expense. And though often discussed before them, the directors have not as yet thought it advisable to expend a large sum of money for this purpose alone, and the consequence is that no very *extra time* has ever been made on our track. And the speed ring, although a feature of our fair, is not the main feature.

But to compensate the public for the loss of this feature of fairs, we have always afforded them an orderly, quiet, peaceable place of resort where they can meet friends and enjoy each others society, and when detained at home they can send their wives and little ones, assured that they will be unmolested and safe from annoyance.

One of the rules of this society, which is strictly adhered to, reads as follows:

"Gambling and the sale or giving away of intoxicating liquors, is strictly prohibited within the Board's jurisdiction; also, no shows of any kind will be allowed."

Thus preventing the presence of the noisy and rough element of society usually congregating when such evils abound.

It is the aim of this society to keep step with the improvements of the country, and to foster and encourage everything which tends to the advancement of the agricultural pursuits in this county.

The exhibition of fine arts and of ladies' work did great credit to the county, and was one of the features of attraction to the immense crowds of visitors.

The Fair was a complete triumph in everything calculated to further the interests of the whole community.

Already much good has been done in that direction. Yet to properly appreciate the improvements made, it is necessary to review the past quarter of a century which has elapsed since the organization of this society.

The most marked results of this progress is observed in the agricultural pursuits. The principal crops raised in this county are wheat and corn. The manner in which the wheat crop is put in shows much improvement over former years, and the yield is greatly improved.

Large crops of corn are also raised in this county, especially on the lands adjacent to our rivers. The soil being well adapted to that crop, and the yield is very heavy when not injured by an overflow.

Our county contains thousands of acres of this rich bottom land, which, being subject to overflows, is rendered almost valueless. But when the proper attention is given to the improvement of the channels of our rivers by straightening and deepening them, it will open out some of the best farm lands in the State. And thus add materially to the wealth and resources of this county.

The soil throughout this county is very productive, and land is held at reasonable prices. We have an unlimited quantity of coal of excellent quality, in the eastern portion of this county, which, since the completion of a railroad to that locality, is being developed, and large quantities shipped to other places.

Of the limestone mentioned in a former report from this county, I would only say that it is yet undeveloped, except to improve some of the principal streets in the town of Princeton. Yet I feel safe in saying that it is of easy access and in quantities sufficient to improve the principal roads in this county, so as to render them passable at all seasons of the year.

But a change in our present road laws will be necessary before much can be done in that direction.

Of the farm stock in this county I can only say, that the improvement is not what it should be. Although our cattle have been

much improved by several herds of Durham, Jersey and Devonshire cattle, being brought into the county.

The horses in this county may be classed as good general purpose horses, although the show at our fairs of light harness and saddle horses, has improved very much in a few years.

There are several good flocks of sheep in the county; Cotswolds, Leicesters and Southdowns; yet the prevalent habit of everyone owning worthless dogs, has prevented many from turning their attention to this profitable industry.

Of swine the Poland-China and Berkshire breeds predominate, and almost all farmers in this county can show something good in the way of stock from one or the other of these breeds, or their crosses, according to the fancy of the owner.

The display of poultry at our last fair was very fine, and showed that much attention was given in that direction by our farmers.

Some attention is given to horticulture in this county, and the crop of fruits was unusually fine the past season. Yet there is not a sufficient quantity of winter apples raised here to supply the demand. Whether it is for want of the proper attention, or some other reason, is yet an undecided question.

The former reports from this county have left but little to say of the resources of this county, and, in conclusion, I would say that our county has plenty of room yet for improvement, which it is our aim to grasp in the near future.

JOSEPH C. HARTIN, *Secretary.*

GRANT COUNTY.

The twenty-seventh annual Fair of the Grant County Agricultural and Stock Association was held on their grounds near Marion, on the 14th, 15th, 16th and 17th days of September, 1880.

Owing to the excitement usually attending a Presidential campaign our people anticipated a small attendance; but the weather was fine, and they seemed to consider the Fair a kind of rest from political squabble. Our association excludes gambling and kindred practices within the inclosure. Nothing is tolerated which need offend the moral and good citizen.

Our grounds, which belong to the association in fee simple, comprise thirty-five acres, and is situated one-half mile east of Marion, on the Marion and Eastern Gravel Road. Good spring water can be had for man and beast on three sides of our grounds and within the inclosure. Numerous shade trees of almost all kinds and sizes are interspersed over the entire inclosure.

The speed ring, which is half mile in length, is on an elevated plane, thirty to forty feet above the ravines and spring branches.

We have ample room and provisions for stock of all kinds. About two hundred and fifty stalls for horses and cattle. Sheep and hog pens arranged with reference to water, and other conveniences. Floral hall, vegetable hall and an amphitheater capable of seating from 2,000 to 2,500 people.

The show of horses and cattle was good, but not large. The sheep show was the best we have ever witnessed, being second to our State Fair only in numbers. Our poultry show we put equal, if not superior, to any of the kind we have witnessed. We have excellent sheep and poultry raisers in our county. Floral hall, and the department usually managed by the ladies, was a credit to the good women of our county, who have always done their part well in making our fairs both attractive and useful. It is as necessary to have the assistance of our ladies in holding a fair as it is to manage household affairs.

We had several self-binding machines in operation by steam power. The show in agricultural implements was very satisfactory.

We have been able to pay all premiums, liquidate all indebtedness incurred for improvements on the grounds, and have \$300 left and anticipate a prosperous future for our association.

D. S. HOGIN, *Secretary*.

GREENE COUNTY.

The eleventh annual Fair was held October 4 to 8, inclusive. The weather being fair, we should have had a good attendance, but the political campaign drew away many of our best friends. We have made some very substantial improvements, and feel encouraged for the coming year. Our expenses were more this year than usual, but improvements were much needed. We paid seventy-five cents on our premiums awarded, which satisfied all exhibitors.

CONDITION OF AGRICULTURE.

The past year has been, taking all crops as a whole, satisfactory to our farmers. Wheat is fast becoming our leading crop. The bottom lands, formerly exclusively used for the production of corn, are fast rivaling the uplands in raising wheat. The increased acreage in wheat, in 1880, leaves the product in bushels about equal to the crop of 1879, late sown land being light, and, in many instances, a failure. Corn is little over half a crop, especially on uplands of a flat, stiff clay nature, and very little corn will be leaving this county

for market outside of home demand, prices here being higher than the market will justify to pay for shipment. Oats were almost a complete failure. Hay good and of excellent quality, equal to last year. Potatoes not sufficient for home use, and all garden products are light. Cabbage a complete failure, owing to the cabbage worm. The increased value of all productions make up for the failure in yield of some of the crops, and farmers are in better condition than a year ago.

Draining by laying tile is making steady progress; some of our worst ground now under drainage produced the finest corn crop this year, the river bottoms not excepted. We have one kiln in this county making a good quality of tile, and the day is close at hand that much of our worthless land will be reclaimed and add largely to the wealth of our production.

Owing to the high price of corn, many hogs went into market poorly fattened, and the stock on hand is less than usual. Few cattle are fed on corn, but more attention is paid to the raising of this class of stock, being less subject to disease than hogs, and of late being more profitable.

Orchard products were fair, of good quality and sold at suitable prices.

P. SCHULTZE, *Secretary*.

HAMILTON COUNTY.

The Hamilton County Agricultural Society had a very poor exhibition this year, on account of a *cyclone*, which passed over their leased ground, entirely demolishing and destroying all the halls, stalls and pens on the ground, also destroying the amphitheater and all the fences around the enclosure; and the society was compelled, on account of the near approach of their Fair, to use the old ground formerly occupied by them, and on which they will in the future hold their annual exhibition, and a better and more favorable report can be expected from this society. I will further add that a large amount of draining is now in progress in this county, adding largely to its productiveness and the health of its population.

L. O. CLIFFORD, *Secretary*.

HARRISON COUNTY.

The twenty-first Fair of the Harrison County Agricultural Society was held on their grounds at Corydon, commencing September 11 and continuing five days. Notwithstanding the political excite-

ment which prevailed, there was an average amount of interest manifested in all of the departments. The number of horses was limited, but was of a better grade than at previous fairs. It is a self-evident fact that holding our fair has enhanced the agricultural wealth of our county by stimulating our farmers to a better mode of cultivating the soil for profit and investing their means in a better grade of stock. The show of jacks and mules was very limited, showing there was a loss of interest taken in them by those interested in that department. The showing of fruit in floral hall was sufficient proof that this branch of agriculture has not been neglected, and the number of young orchards dotted all over the county, just beginning to bear, will, in a few years, make Harrison county one of the leading fruit-growing counties in Southern Indiana. The attendance was larger this year than it has ever been. Many visitors from other counties of the State, also from Kentucky, were in attendance, our Kentucky friends taking most of the premiums for fine sheep. The distribution of premiums was very satisfactory both to exhibitor and visitor. After paying something over nineteen hundred dollars in premiums and improvements, there still remains in the treasury seven hundred and seventeen dollars, showing a financial success. The show of hogs and sheep was one of the main features of the Fair, being of an excellent quality. Our crops, taken as a whole, have been very satisfactory to the producer. As our Fair increases in years it also increases in the number in attendance, and we feel that it is only a matter of time when the Harrison County Agricultural Society shall be second to none in the State.

Our friend, Mr. Kingsberry, of the Indiana Farmer Company, delivered a very interesting address, taking for his subject, "Agriculture," which added much to the occasion.

CHARLES MARTIN, *Secretary*.

HOWARD COUNTY.

The fourth annual Fair of the Agricultural Association, under its present management, was held at Kokomo, Indiana, September 13 to 18 inclusive. The Fair was a success generally, only a few of the departments being inferior to what the most hopeful anticipated. The show in live stock was particularly lacking in the number of entries that should have been made; especially was this true of cattle. Just think of paying more money as premiums on hogs and sheep than on cattle! But this was no fault of the association,

as not half the premiums offered on cattle were competed for. It is with some local pride, however, that the directors look into the future. Already there are some five or six herds of cattle being fed in this county for the next fair. The fruit produced in this county and exhibited at the Fair was of superior quality. The managers have been holding the Fair a full week heretofore, but have come to realize that this is not best, hence will hereafter shorten the time from six to four days.

A. N. GRANT, *Secretary.*

HUNTINGTON COUNTY.

The twelfth annual Fair of the Huntington County Agricultural Society was held on their beautiful grounds adjoining the city of Huntington, on September 15, 16, 17 and 18, 1880. A grand success. The weather was very fine.

The first day we devoted wholly to making entries, and assigning stock and articles to their places. On the second day the exhibition of stock began, which was in all things the most complete of any exhibition ever witnessed in this county, and we doubt very much if ever witnessed in any of our sister counties.

The horse show was "just simply immense." Norman, Clydesdale, Hambletonian, coach, running, trotting, pacing, saddle, farm and every other kind of horse known to the country was there, and they were all good ones.

The show of short-horns was extra good. Huntington county is noted for her short-horns, but a foreign herd "took the cake" over some of ours this time, but can't do it again. There were plenty of Jerseys there, too, and they made a very good "little" show.

The show of hogs was short in comparison with other years here on account of the hog cholera still prevailing to some extent.

The sheep show was better than ever before. Several herd of sheep imported from Canada were on exhibition.

The poultry show was good, and our new poultry house was running over with large and choice fowls of every description.

The farming implement show was only in keeping with the balance of the Fair ("immense"), and indicated that the farmers of Huntington county don't do all their work in the old-fashioned way.

The two large halls were jam full of nice things, and the ladies did themselves great credit in their side of the exhibition, and the consequence was that the halls were full of spectators from early morning until late in the evening.

There was not a large quantity of fruit on exhibition, but what was there did not lack in quality.

Grain and seeds were well represented, and made a good display.

We started out this year with \$3.25 in the treasury (having paid the balance of our old debt of over \$1.400 last year), and we will have about \$600 left after paying everything. We have worked hard for the last three years because we were in debt, and if we have made any mistakes it is only human.

CONDITION OF AGRICULTURE.

The agricultural interests in this county were never in better shape.

Farmers are in easy circumstances generally, having raised good crops for years, and they are now improving their farms in every way and paying as they go.

The corn and wheat crop was an average this year, both bringing good prices.

More hogs were fed in this county this year than for the last three years, on account of the disappearance, to some extent, of the cholera.

A great many cattle are fed and shipped from this county every year.

We have completed about one hundred miles of turnpike in this county, one-half of which are free and the other toll roads, and the amount of hauling that has been done this season indicates that they are highly appreciated. We also have a standard gauge railroad under contract to run from Chicago to Baltimore.

Lime City, as we are called, is on a solid basis, resting on limestone of the very best quality, and the limestone is not all under the city, because the several lime companies above the city have burned and shipped 550,000 bushels this year of the best lime in the country, which is worth on board the cars here \$80,000, which will be observed is quite a source of revenue to this county. This would require seventy-two trains of twenty-five cars each to move it.

The value of lands, lots and improvements in this

county as assessed for taxation is	\$5,209,525 00
Value of personal property as returned by assessor.....	1,678,918 00

Total taxable value.....	\$6,888,443 00
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Total number of polls assessed, 3,707.

Total amount of dog tax collected for the year.....	\$1,486 00
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From October, 1879, to October, 1880, the county paid	
for sheep killed by dogs.....	\$587 75

WILLIS A. JONES, *Secretary*.

JACKSON COUNTY.

The fifth annual Fair of the Jackson County Agricultural Society was held on the Society's grounds at Brownstown, August 23, 24, 25, 26 and 27, 1880. Saturday, August 28, being set apart for general sale day of stock.

Notwithstanding the weather was exceedingly warm, the attendance was large, especially on the 25th. This day, as on the previous year, was devoted to the old settlers of the county. By invitation all persons who had resided in the county thirty years and attained the age of sixty years, were admitted free. The result was a large attendance and a pleasant time, and the permanent organization of old settlers continued.

The society gave the floral and horticultural departments in charge of a committee of ladies to arrange and superintend, which proved a success and rendered general satisfaction, and demonstrates the fact that women are men's help even in agricultural societies.

The various departments for exhibition were well filled. The show of long wool sheep far surpassed any previous fair, as did also draft and general purpose horses. The show of cattle and hogs was not as large as on the previous years, but a better quality was on exhibition, which proves that our farmers are keeping up with the times.

The floral and horticultural hall was well filled with the product of Jackson counties rich soil and the handywork of its women.

The society's grounds are situated one mile from the Ohio and Mississippi railroad, on a beautiful site, with a never failing stream of water running closely, plenty of shade and a good half-mile track, and have plenty of stalls for all kinds of stock and ample provision is made every year for feed and boarding on the ground at fare rates.

The receipts the present year paid all premiums and expenses, and we had a surplus of over two hundred dollars. Taken altogether, we had a most excellent fair and we feel that our organization is doing much good and making advancements every year and confidently expect the next fair to be the best we have ever had.

JOEL H. MATLOCK, *Secretary.*

JASPER COUNTY.

On the 21st to the 24th days of September, 1880, inclusive, was held the ninth annual Fair of Jasper county. This is the second held under the auspices of the Jasper County Agricultural Society.

Horses for draft and general purposes; cattle for beef-producing; hogs, poultry and machinery, were largely shown and make a large display. There was a noticeable lack of grains, vegetables, fruits and needle-work. The races were poor and a severe disappointment to those who came for sport. The educational department showed marked improvement over the exhibition of last year.

Although the weather was fine the attendance, except the third day, was slim. Of course the amount received as gate money was small.

It was found necessary, in order to avoid debt, to scale the premiums awarded, and this was done at the rate of 80 per cent.

About \$500 was expended on the grounds during the year in constructing and repairing buildings, sheds, pens, fences, etc. Much of this improvement is considered permanent.

CONDITION OF AGRICULTURE.

The wheat crop of Jasper county for the year 1880 was not as good when harvested and threshed as some had predicted. The yield was not large and the grain was only fair in quality.

Corn matured well, but was short of a large crop; indeed scarcely up to a fair average. It finds a ready market at 32 to 35 cents a bushel.

Oats were light and inferior in quality.

Buckwheat may be reckoned a fair crop.

Not much rye and no barley raised.

Flax made an average return.

Irish potatoes are reported scarce. At storing time they were quoted from 45 to 75 cents per bushel.

Sweet potatoes, though not extensively planted, made a good crop, excellent in quality.

Garden products—cabbages and the like—were inferior and a light crop.

Fruit was abundant, particularly apples. At harvest time hand picked winter fruit, choice, brought 35 to 40 cents per bushel delivered. By far greater than ever before, was the manufacture of cider and vinegar.

More attention has been paid in late years to the improvement of the breed of hogs, perhaps, than to any other class of domestic animals. The Poland China, Berkshire and Jersey Reds are favorites in the order named. The direction taken by cattle breeders is to increase the beef capacity of their herds, hence short-horns have been favorites almost to the exclusion of all others for the purpose of crossing with native stock. A creamery has recently been started at Rensselaer, which may, after a time, modify this tendency.

Quite an interest has developed within two or three years in poultry breeding. Several varieties, each having special points of excellence, may now be found scattered among farmers and fanciers. The direction taken by horse breeders generally has been to increase the size and capacity for draft. Very good crosses are found among the farmers, which shows their ancestry to have been Clydesdales or Normans, and not far removed. A few, possibly half a dozen, running horses are owned in this county, but they are not kept for breeding purposes.

Within two or three years tile factories have been established in Jasper county. These find a fair market for all the drain tile they have yet been able to make. The use of this system of draining is telling to the advantage of those who have adopted it, in larger, better and surer crops.

William K. Parkison, Esq., president of the Jasper County Agricultural Society, has been indomitable in his efforts to direct towards an improved system of farming and stock-growing. To him and to his coadjutors of the board of directors is due much praise for the disinterested zeal they have manifested, giving time and labor without money reward to make our county Fair interesting and beneficial to visitors.

HORACE E. JAMES, *Secretary.*

JAY COUNTY.

The Jay County Agricultural, Horticultural and Industrial Joint Stock Company held its ninth annual Fair on their grounds near Portland, on October 5, 6, 7 and 8, 1880. The number of entries exceeded all other years. The sale of gate tickets was not so large as the preceding year, and we assign the cause to it being the campaign year. On the third day of the Fair, the Hon. James G. Blaine spoke at our place, and if experience is worth anything, I would advise secretaries of all county societies to postpone their Fairs rather than to try and beat Blaine drawing crowds. It can't be done I say, I've tried it. But we managed to pay the premiums in full and all expenses of the Fair, and have in the treasury \$696.07 (for rainy days.)

CONDITION OF AGRICULTURE.

The condition of the farmers and their farms is improving rapidly. The farms are better tilled, and, consequently, their granaries are better filled. The improvement in cattle is getting to be quite a feature with our farmers. Mr. R. T. Hammons, Mr. Wm. Hilton

and Messrs. Crowell & Detamore, are breeding and importing fine cattle, aiming to displace the old scrub and non-paying stock by putting in their place fine blooded and paying cattle.

Wheat, corn, oats, rye and other cereals were an average crop. Potatoes light yield; apples moderate crop.

GEO. W. MILLER, *Secretary*.

JEFFERSON COUNTY.

A glance at the accompanying statement will give an idea of the condition of our society as well, if not better, than any words of mine. We endeavored to out-general a *circus company* and failed.

The condition of our farmers have kept pace with that of the general average. Good crops of all the cereals but a poor prospect for the grain crop for 1881. We feel as regards this report, like the men that went to sea in a bowl—Had our Fair been stronger this report had been longer.

GAM. S. TAYLOR, *Secretary*.

JOHNSON COUNTY.

In answer to your circular in regard to agriculture in this county I would report the wheat crop of 1880 above an average; the corn crop much less than an average.

Our people raise horses, cattle, hogs and sheep. Some mules are also raised. The farms in this county are better cultivated than at any former period in our history. Farms that ten and fifteen years ago were considered third rate are now more productive than the best farms of that time. The principal agent in bringing about this improvement in the soil is underdrainage.

The Fair was a success, but we can not say that it was an improvement on the exhibition of the preceding year. The number of entries was about the same as last year; also, the attendance and receipts. We paid all our premiums in full, and thus the managers presume that everybody was pleased.

RICHARD M. JOHNSON, *Secretary*.

KNOX COUNTY.

The annual Fair of the Knox County Agricultural and Mechanical Society was held October 18 to 23, 1880. Though late in the sea-

son, the several departments were well represented by entries of merit.

The show of live stock was very fine, and the display of agricultural implements was probably the finest ever held in southern Indiana, while the other departments were each ably represented by articles of merit as usual.

The weather was severe ; very unfavorable the whole week. Preventing the attendance of many visitors, and seriously interfering with our receipts.

The total number of paying visitors was 12,057.

Total receipts.....	\$4,093 25
Expenditures.....	4,818 50

Our finances would have been at least even, except we expended for improvements \$311.24, besides our regular dividend to stockholders of two and one-half per cent, in the way of admission tickets. We paid all premiums and other bills in full.

E. R. STEEN, *Secretary*.

LAGRANGE COUNTY.

The Lagrange County Agricultural Society held its twenty-eighth annual Fair at Lagrange, Indiana, September 22, 23 and 24, 1880. The list of entries was not as large as usual, nor was the attendance as good for several reasons. Just at that time unfavorable circumstances for a good and successful fair, the campaign being carried on in its greatest excitement in this locality, drew largely from the attendance at the fair. The premiums paid amounted to almost \$700, and expenses of fair and the improvements made by the society on its grounds left nothing to pay on the debt of the society. The officers of the society have re-funded the debt to a 7 per cent loan and leaves the indebtedness of said society at about \$300 on the grounds. With two or three years of good support at our coming fairs I think the society will be able to pay off its entire indebtedness.

Respectfully submitted,

J. M. PRESTON, *Secretary*.

LAKE COUNTY.

The Lake County Agricultural Society held its twenty-second annual exhibition on their Fair grounds October 5, 6, 7 and 8, 1880. The weather was all that could be desired, but the attendance was

not quite as large as that of last year, owing to the difficulty of the family tickets, which was abolished, and a twenty-five cent ticket issued in its stead. This caused a great deal of dissatisfaction among the farmers and also the greater part of our townspeople, but nevertheless the Fair turned out in the end better than we expected, having taken in sufficient to pay all premiums and expenses, and leaving us a balance on hand.

There was a very good show of horses, much superior to last year. The cattle show was not quite so good, and there was a decided improvement in sheep this year. That of the hog department was excellent. The showing of grain and farm products was very small.

The floral hall, or ladies' department, was a very poor affair this year, owing to the dissatisfaction of the ladies at the society for not building a new hall, as partially promised at our annual meeting, but the society felt that they were unable to stand the expense this year, consequently the ladies would take no interest in the matter, so this year the ladies department was a complete failure.

It is the intention of the society, at their meeting in January, 1881, to talk over the matter of building a new hall, to cost in the neighborhood of \$1,000, providing the citizens will help swell our funds now on hand by subscription.

GEORGE I. MAILLET, *Secretary.*

LAWRENCE COUNTY.

The twelfth annual Fair of the Lawrence County Agricultural Society was held on the grounds of the society, near Bedford, September 14, 15, 16, 17 and 18, 1880.

This was, in some respects, the most successful Fair for several years. The weather was good, the Fair was good, the attendance large and the receipts sufficient to pay all premiums and expenses in full.

The past year has been a prosperous one for the farmers of this county. The wheat crop was better than an average; corn crop fully up to the average, and other crops good.

This county is steadily gaining in population and wealth; is about an average of the State for agricultural purposes, and rather above the average for stock raising purposes.

WILLIAM ERWIN, *Secretary.*

MADISON COUNTY.

The Madison County Joint Agricultural Society held its thirteenth annual Fair on their beautiful grounds near the city of Anderson, commencing September 7, 1880, and continuing four days. The weather on the first and second days was very unfavorable and disagreeable, being very cool, which doubtless detracted from the attendance those days, but during the latter days the weather was more pleasant and attendance good. The number of entries was the largest ever made, except 1879. The exhibition in all departments good, especially so in the show of all kinds of stock. Among the exhibitors in the horse department were J. W. Lewark, Robert Bogue, W. B. Legg, John Starr, Henry Brounenberg, O. E. Rich, William Meikle, Wash. Black, Ira Williams and others. In the cattle department, Thomas Wilhoit, D. C. East, A. Garretson & Bro., and others. In the swine department, A. W. Martin, Wesley White, D. Canaday, and others. Sheep department, Thomas Wilhoit, H. C. Meredith, R. I. Voris & Son, I. N. Hodson, B. Armstrong, John Franklin, and others. The exhibition of poultry was the best we ever had, and judged by I. N. Barker, of Thorntown, Indiana. Much praise is due the farmers and breeders of improved stock for the attention they are giving to the improvement of their stock. The display in the floral and art halls was very good. The ladies deserve much praise for the interest they take in making our fairs a success. The society paid all premiums in full, are entirely out of debt, and have money in the treasury. The society made valuable improvements last year, built a new fence, seven feet high, entirely around the grounds, also a new fence around the time track, and enclosed six acres more ground, making in all thirty acres enclosed by new fence, which now make our grounds the most complete County Fair grounds in the State.

CROPS.

The wheat crop above the average last year. The acreage of wheat now sown is equal to or more than last year. Corn light. Oats very good. Rye and barley not grown much in this county. The live stock interest is on the increase, notwithstanding the loss of swine from cholera. Wool growing receives considerable attention, and is a source of profit to those who give the business proper attention.

In addition to stable and barn-yard manure, the farmer regards the clover the chief recuperator of his weak and exhausted land.

Drainage has received considerable attention; the farmers of this

county have used a great deal of drain tile within the last few years, with very satisfactory results.

Most of our fencing is done with split rails, though some is made with posts and boards, posts and barbed wire, and hedge, considerable hedge being planted last summer and fall.

We have very good roads, the gravel roads being "pay pikes," made from "pit" or river gravel.

The dairy interest is very poorly represented in this county. We have none other than for milk. No butter or cheese made as a business.

C. K. McCULLOUGH, *Secretary*.

MARION COUNTY.

The Marion County Agricultural and Horticultural Society, for the year 1880, would report as follows:

The society held meetings during the year, at which reports of special committees on the agricultural and horticultural interests of the county were made subjects for special consideration. At each meeting subjects suited to the season have been discussed and papers read. The meetings at all times have not been largely attended, but full of interest, with an increased attendance as the object of these monthly meetings became more fully known.

In the month of June, — day, the society held an exhibition of fruits, vegetables and flowers in the rooms of the State Board of Agriculture, which was a creditable display, not large but select. Small premiums were awarded to choice varieties.

At each of the subsequent meetings from June to October, we had an exhibition of products, fruits, vegetables, flowers and farm products, which was a fine display, in view of the fact that no awards were made until the October meeting, at which time premiums were awarded to exhibitors for the best exhibit of fruits, vegetables, flowers and farm products. The society had at this time a very fine exhibition. Many of the products displayed were not excelled in quality at State Fairs.

The society has arranged to commence with the June meeting of 1881, and hold in that month an exhibition, at which small awards will be made on products exhibited, and also award premiums at each monthly meeting during the summer and fall thereafter, closing with the October meeting. It is the purpose of the society in these monthly meetings, to be held in different portions of the county, to enlist the hearty co-operation of our leading agriculturists, believing that in this way we can accomplish more

in developing a general interest in agricultural pursuits than we can by holding a single exhibition in the year, which is more especially true in our county, on account of the State Fair being held in this county.

A further reason for holding monthly exhibitions, as before indicated, is that the city affords a good market for small fruits, vegetables, etc., and our farmers are becoming more and more interested each year in these productions. The holding of monthly meetings and exhibits of products will, as we believe, tend to increase the interest in the line of products in which our farmers and fruit growers are more largely interested.

CONDITION OF AGRICULTURE.

The agricultural products of this county are varied, the county being centrally located, having situated within it the capital of the State, numbering over seventy-five thousand inhabitants, and a great railroad center, convenient for a million and a quarter of people to visit, transact business and return the same day (if desired), which fills our city with a large visiting population, requiring extensive hotel accommodations, and consequently a large daily supply of market products. Hence we have, surrounding the city, a considerable number of market gardeners, situated upon small tracts of land, usually prosperous, many of whom become wealthy in a few years by giving close attention to their business. They are demonstrating also that success does not so much depend upon the number of acres as the methods of cultivation; yet market gardening has not come up to that full measure of success desired. Many of them are situated upon lands that are wet and cold, which might be made certainly productive by under-drainage. Very many gardeners and farmers, also, seem to think that getting rid of surface water by surface drains is the sum of all that should be done in draining, while underneath the surface is stagnant water, which renders the soil cold and unproductive. The warm-drained soil requires much less labor in cultivation, gives a larger pasturage, or feeding ground, for the roots of plants, and appropriates readily the applied manures and fertilizers. We note also the fact that our gardeners (many of them) seem to have little knowledge of the loss of value to manures sustained by heating and the escape of ammonia and acids. It is a common practice among gardeners to haul from the city, or elsewhere, large quantities of stable manures, and throw into a heap or piles sufficiently large to heat, where they smoke like a boiling cauldron through the winter months, losing a large per cent. of their value. But the gardener adds in quantity

where he lacks in value, but it is expensive. The same custom prevails among our larger farmers to the extent that manures are left to rot about the barn, or against it, the latter not being uncommon. But little has been done in this county in the way of mixing manures with soil in heaps to preserve its value. Our farmers and gardeners can also procure from our fertilizing establishments located near the city, fertilizers adapted to the wants of their soil. So far only a few have tried them; those that have speak highly of the result. Our soil is adapted to the growth of clover, which has a wonderful effect in the recuperation of the soil; in addition, the manures and fertilizers to be had from the city renders it an easy matter, with sufficient drainage, to bring our soils to the highest productive state. We very much need to educate ourselves up to the point of making the most of our surrounding advantages in this county.

SMALL FRUITS.

There is a constantly increasing demand in our markets for small fruits fresh for the table, and but few of our farmers and gardeners have given attention to this important interest. The damage from insects has discouraged many from extending or engaging largely in the growing of small fruits.

OTHER FRUIT.

Apples, pears, etc., have shared a similar fate, with only a few exceptions. Orchards have been neglected, not to a greater extent, perhaps, than in other portions of the State, but our convenience to market, and the profits to be realized from good market fruit, should serve to direct public attention to this important branch of agricultural products.

DAIRY INTEREST.

There are a number of large dairies in this county, many of them located near the city, and the number is increasing each year, supplying the city with milk. Many of our dairymen are bringing up their stock and the management of their dairies to a perfection very commendable. There are some, however, that are uncleanly and inhuman. In addition to those furnishing daily supplies of milk, there are butter dairies producing the best brands of butter. It is no longer necessary to ship large quantities of butter from the creameries in Ohio and Michigan to supply the demand for an excellent quality in the city. We have every facility for meeting the demand, and it will be done in the future.

GENERAL FARM INTERESTS.

The general intelligence, thrift and enterprise of our farmers are equal to any in the State. We believe them to be as ready to use all available means to advance the interests of agriculture as any people, and that they have made as much or more advancement than many others. Yet much remains to be done to bring us up to that full measure of success so much desired.

The production of corn, wheat, oats, grasses and live stock of all kinds are above an average, but we need to do much better with our market facilities.

Every foot of available land in the county should be brought into the highest state of cultivation to supply the daily wants of so large a population, and add to the general prosperity of our people.

OUR SOCIETY'S WORK.

The Marion County Agricultural and Horticultural Society, having in view the advancement of the varied interests named, (and others not mentioned,) have arranged to hold monthly meetings at different points in the county, at which the various subjects relating to progressive agriculture may be considered in well matured papers and discussions. We have also further determined to award premiums for products exhibited at the meetings held during the summer months, believing, that in this way, we shall interest more fully the general farming interests. We have, in part, demonstrated the utility of the plan the past season, with very gratifying success.

J. J. W. BILLINGSLEY, *Secretary*.

MONTGOMERY COUNTY.

The Montgomery County Union Agricultural Society held its first annual exhibition on the society's grounds September 6 to 11 inclusive. The weather was all that could be desired and the attendance large, making the Fair a complete success in every respect.

The Fair grounds, owned in fee simple by the Society, containing 62½ acres, heavily shaded by original forest trees, are universally conceded the finest grounds in the State, being abundantly supplied with water from ice-cold springs which is forced to all parts of the grounds through pipes, thereby making an attractive as well as a valuable feature.

The society has expended about \$15,000 in improvements and it is certainly surpassed by none in the State. Our track is one-half

mile in length, sixty feet wide and built at a cost of \$2,000, being so situated that races can be witnessed from any point without the view being obstructed. Our buildings are all built with a view to permanency, being built on brick foundations and are composed as follows: Floral hall, covering 6,000 square feet; amphitheatre with capacity of 1,500 seats. Three buildings for hogs and sheep, each 21 by 140 feet, all under cover; three hundred stalls for horses and cattle, a greater part of which are box stalls; dining room, poultry house and a large power hall for the display of machinery.

The grounds are situated within one-fourth mile of the court house, all within the corporate limits of the city, with railroads on either side.

As before stated, we held our first Fair last fall and the patrons, press and public generally were profuse in their praises. The management have been congratulated repeatedly upon the success of the enterprise. Our great success is, undoubtedly, due, in a measure, to the fact that no "games of chance" were allowed. Neither was there allowed the sale of any intoxicating liquors, and, as a natural consequence, nothing but the best of order was observed.

Montgomery county ranks among the first in the State. What used to be her wet lands (of which she at one time had considerable) has now become the most productive, owing to the good system of both open and under drainage, which has been carried on extensively within the last few years.

The county has seventy-one miles of toll gravel road; thirty-seven miles of free gravel road, built according to the free gravel road law of 1877, with fifty miles more of free gravel road under petition on file in the Auditor's office.

Hog cholera has been prevalent this year, but not to such an extent as to discourage the industry. F. L. SNYDER, *Secretary*.

MORGAN COUNTY.

The Morgan County Agricultural Association held its twenty-ninth annual Fair, at Martinsville, from the 4th to the 8th day of October. The list of entries was largely in excess of any previous year, and the exhibition in every department, except the cattle department, was unusually good, and the weather fine. But alas! politics did it. Two *grand rallies* upon the last days of the Fair, and the preparation of the people to attend them for the few days previous, cut short the gate receipts, and we were compelled to pro-

rata our premiums in all, except the speed ring, which was paid in full.

All crops are a fair average in this county this year. No entire failures and no extra good crops of any kind.

H. A. SMOCK, *Secretary*.

NEWTON COUNTY.

The Newton County Agricultural Association held their third annual Fair on their Fair grounds at Morocco, on September 7, 8, 9 and 10. Weather being fine and attendance good every day.

The exhibition of horses was first class, and we can only say that for the number of entries, the show of good horses was never better.

The entries of jacks and mules were few, those shown being of good quality; might compete at any Fair in their class.

The show of cattle was small, but good in quality.

The show of sheep and hogs was good. Hogs being the chief product of this county.

The show of poultry was rather poor, as there is but little interest taken in this line in the county.

In all other departments the show was very good, the floral hall being well filled. The merchants helping the show with a good stock of dry goods, boots and shoes.

Our receipts this year were very good. We paid our premiums in full, but left us a little in debt. The per centage was so small that it was thought best to pay in full, although we run the Fair on the pro rata system.

CONDITION OF AGRICULTURE.

Wheat has been a good crop in this county for the last two years. Nearly all the farmers are trying it this year.

Corn is the great staple crop of this county. This year it was far below the average, but good in quality.

Farmers in this county give more attention to the raising of hogs than any other product. Some few farmers are giving more attention to horse raising than in former years, which is much wanted in this section of the country. Some few farmers are trying sheep raising, which is quite a new feature in this county.

JAS. ROBINSON, *Secretary*.

NOBLE COUNTY.

The twenty-fifth annual Fair of the Noble County Agricultural Society was held on the grounds of the society at Ligonier, Ind., October 6, 7, 8 and 9, 1880. Considering the great political excitement that prevailed at the time, our show of stock and attendance of the people was much better than we expected. The receipts at the gates and other sources more than paid the liberal premiums offered by the society on the various classes. All premiums awarded, as well as all other claims, are paid, leaving a balance of \$100 in the treasury. Encouraged by the result of the last two fairs, the directors intend to build a large and well-arranged floral hall, which is much needed, and will add to the future prosperity of the society.

The number of entries in the several classes of horses, cattle, sheep and hogs was equal to that of former years; also, the exhibition of textile fabrics, ladies' fancy articles, fine arts, fruits and provisions, in the old floral hall, was splendid. The show in agricultural products was large and fine. A full line of buggies and carriages on exhibition attracted much attention. Everything was fully represented except agricultural implements, which were almost entirely neglected.

The state of agriculture in this section is in excellent condition, and farmers, as a rule, are prosperous. Wheat is the principal product in this part of the State, and farmers have supplied themselves with all the best improved machinery to raise and take care of that important crop. We have had successively three very large crops of wheat. The corn crop of 1880 was rather light, on account of dry weather in July and August.

The prospect for the growing wheat crop is not very flattering, owing to dry weather at time of seeding and after, continuing dry until cold weather set in early in November. The winter has thus far been favorable to wheat, the ground being covered with a light snow, and, being frozen steady without any thaw, the wheat may come out all right in the spring.

Much attention has been paid by our enterprising farmers to improving their stock of horses and cattle, and we can now show as fine lots of the best breeds of horses and herds of short-horn cattle as can be found in the State. The prospects of the Noble county farmers and their agricultural society is cheering. Our next Fair will be held October 12, 13, 14 and 15, 1881.

E. B. GERBER, *Secretary.*

PARKE COUNTY.

The farmers and business men of Parke county seeing the need of a county fair and exhibition, called a meeting in early spring of this year and organized a Stock Agricultural Society with a capital stock of \$4,000, which was readily subscribed to the amount of \$3,750. The society appointed a board of directors, who at once proceeded to work. They leased the beautiful grove of Alexander Puett, one-fourth mile west of Rockville, containing about 50 acres of ground, and had it enclosed with a nice substantial fence seven feet high; also erected about 160 stalls, hog and sheep pens, and one large hall. An abundant supply of water was furnished by two large wells; shade trees are abundant in a natural state upon the grounds. A beautiful half-mile track was laid out within the enclosure for the double purpose of showing speed horses, carriage horses and roadsters. The track is egg shape, fifty feet wide, and has only about eleven inches of variation, in the entire distance, of being level. The beauty and finish of the work on the track has elicited the warmest commendation from all horsemen who have visited it. The society has expended about \$2,500 on the grounds the past year and will expend the coming season about \$1,500, which will make our grounds one among the finest in the State. Our first exhibition was held on the 11th, 12th and 13th of August—"the first of the season." A liberal premium list was offered which was spiritedly contested for by the exhibitors. The weather was fine and the display in all departments was excellent.

Among the great attractions were the fine horses from Swain & Palmer's stock stables, of Bellmore, and Crooke & Adams' stables. of New Discovery; also the fine herd of Holstein cattle of T. H. Anderson, and the fine herd of Jerseys belonging to S. L. McCune of this vicinity.

The hog, sheep and poultry departments were well represented and attracted large crowds. In the speed ring there were about forty entries, and some of the best horses in the State were present, which made it lively for the sporting community.

In the needle work department and domestic manufactures the display was grand, and the ladies of Parke county deserve great credit.

Notwithstanding the large expenditure of money in the way of improvements, our society paid dollar for dollar, and had \$400 of a balance in the treasury.

Our people in the main are order-loving, law-abiding people, and our Board, to make double sure, strenuously guarded all the ap-

proaches to rowdyism and disturbance, by excluding, as far as possible, all intoxicating liquors, lotteries, swindles and humbugs. True, our society might gain a few dollars by selling privileges to such tricksters, permitting them to impose upon the credulity and filch from the pockets of those who are not schooled in the vile ways of this wicked world. But they chose rather to protect this class than to profit at their expense.

Rockville, the county seat of Parke, is a beautiful town, well laid out and nicely set with shade trees. We have in our town some very enterprising business men; but what we most need are more manufactories. We have six gravel roads, and the Logansport branch of the Vandalia railroad. A fine court house, nearly completed, costing about \$100,000, and a fine hotel that will be ready to accommodate the public in a few months.

DAVID H. WEBB, *Secretary.*

PERRY COUNTY.

The Perry County Agricultural and Mechanical Association held its ninth annual Fair on its grounds, near Rome, commencing on the first Monday in October, and continuing five days. The entries in the floral hall were not up to former seasons, but in quality excelled other seasons. The stock department was in excess of former years in number and quality; but all departments were well represented. On account of the excessive rain in the spring, crops are short; wheat not more than half crop. The coming crop of wheat promises well—acreage large. The corn crop short—all low grounds drowned out; not more corn than for home consumption. Oats almost an entire failure. Barley very good. Apple crop very poor; none scarcely for home use. Peaches in the bottom lands, none; on hills good. The potato crop is smaller in this county than for many years. Farmers that planted at the usual time of planting lost all by the wet weather, and those that planted later did not get more than half stand, then the early winter caught half in the ground, which cuts the crop very short. Farmers are raising more hogs than of former years, and turning their attention to raising small grain. There is a decided improvement in the way of planting small grain in this county, in the way of preparing the ground and in machinery, such as drills and harrows and reapers and steam threshers. Sheep are coming into favor among hill farmers. The rotation of crops in this county, by good farmers, are clover sown in wheat or oats, two or three clover, two years in

wheat, two years in corn, one year in potatoes; but a majority of farmers have no regular rotation.

The old-fashioned way of hauling out manure from the barn yard and scattering in field in the fall and spring before breaking, is still in vogue, there being no phosphates or plasters used.

The majority of fences are still of the old-fashioned worm rail on the hills, and in the bottoms posts and slats, and some hedge.

There are no dairies in this county; farmers sell their surplus butter at the nearest town.

The roads are still worked in the old-fashioned way—plowed and scraped in the spring or fall. It is almost impossible for farmers to market their produce in winter. We have no railroads and have to depend on the river for transportation, and the ice generally hinders shipping.

Our Fair is now recognized as one of the best county fairs in the State, always paying premiums in full, cash.

J. L. WHITEHEAD, *Secretary*.

POSEY COUNTY.

The twenty-second annual Fair of the Posey County Agricultural Society was held September 14, 15, 16 and 17, 1880, and was as usual a success in every particular. The society owns twenty-four acres of ground one-half mile from the town of New Harmony, and have every convenience for exhibitors and visitors. During the last year many improvements have been added to the grounds by new buildings and line shafting for machinery.

The society is entirely out of debt, own the grounds in fee simple, have \$1,000 at interest and a surplus in the hands of the treasurer of \$200, and also have \$125 invested in stock in a hotel in town.

The principal crop raised in the county is wheat, and the crop, although not as heavy as the crop of 1879, was over an average for the State. The crop has mostly been sold, but there are many thousands of bushels yet in the hands of the farmers. The average price paid in the county was ninety-five cents per bushel. When last seen, the present wheat was looking well, but being generally late sown, did not show as promising as last year at this time. It is now, January 12, under heavy snow, and has been ever since the middle of November, with the exception of a short time when the snow melted off in December. There is a greater area sown than last year, and it came up well. The corn crop is short, owing to a protracted drought in June, and a large proportion of it is yet in

the fields, the cold and snow making it impossible to gather it. There is no great demand for it, and the price by the wagon load is thirty-five to forty cents per bushel. Hogs were mostly sold on foot during the summer and fall, and driven to Evansville to market. They were generally sold by lots or so much per head. There has been quite a number slaughtered in the county, the price paid being four and one-fourth cents gross or five cents net per pound. This county is rapidly improving. The timber being cleared off and made into lumber for fencing, building, etc. The old worn fences are fast giving way to neat plank fences and Osage orange hedges. Large tracts of land are being cleared and brought into cultivation, particularly the rich bottoms along the Wabash river, that were a few years since considered too low and wet for cultivation, are now being drained under the State law for the drainage of wet and overflowed lands by ditching, and also by the use of tile for under draining, there being business for five tile manufacturing in the county.

There is now nearly completed a railroad from Evansville to Peoria, in Illinois, passing through the richest farming portion of the county and crossing the Wabash a short distance below Grayville, Illinois. It runs within six miles of our fair grounds. There is also another road projected from New Harmony to connect with the Owensville branch of the Evansville and Terre Haute Railroad, but if this should not be built, we are about as well off as any county in the State for transportation, having the Ohio river on the south and the Wabash on the west and north, the St. Louis and South-Eastern Railroad running from the south-east corner of the county to the north-west part and crossing the Wabash river, the Evansville and Peoria Railroad passing through the northern townships, and also a regular packet running daily from New Harmony to Grayville, Illinois, making close connection with the Vincennes and Cairo railroad. With all these facilities for shipping our produce, and with the best farming lands of any county in the State, it would be strange indeed if our farmers were not prosperous.

In addition to wheat and corn, which are the staples, all kinds of grains and grapes do well, and clover is becoming an important crop, not only for the hay and its wonderful fertilizing qualities, but for the seed which is becoming quite a source of income to our farmers. Fruits of all kinds do well when properly cared for, but farmers generally pay but little attention to it. All kinds of stock are healthy. Hogs are all in which there has been much improvement for several years. Sheep do well in any part of the county, but owing to the ravages of the dogs very few are kept.

THE AGRICULTURAL SOCIETY.

The regular annual meeting of the Posey County Agricultural Society was held at New Harmony on Wednesday, December 1, 1880, and was called to order by Robert Clark, President.

The minutes of the regular meeting of the society in June were read and adopted. The minutes of the meetings of the Board of Directors were also read and concurred in.

The secretary submitted the following report of the receipts and expenditures through that office for the six months ending December 1, 1880, as follows :

Receipts.

For admission tickets to twenty-second Fair.....	\$1,916 50
For percentage on entries.....	412 95
For horse stalls.....	79 50
For advertisements in premium list.....	30 00
For rent of booths and grounds.....	1,017 15
Total receipts	\$3,456 10

Orders Drawn on Treasurer.

Premium orders.....	\$1,995 00
Expenses and repairs.....	1,127 35
Rebuilding Agricultural Hall.....	250 00
Investment in new hotel.....	125 00
Line shafting.....	75 75
Total orders drawn.....	\$3,573 10
Amount orders drawn over receipts.....	117 00

FRANK D. BOLTON, *Secretary.*

The treasurer's report was read as follows :

June 1, 1880, amount on hand.....	\$312 47
December 1, received from secretary to date.....	3,456 10
Received balance on note, J. L. Harris... ..	36 00
Total receipts.....	\$3,804 57
Orders paid, as per vouchers filed.....	3,573 10
Balance on hand this date.....	\$231 47

A. H. FRETAGEOT, *Treasurer.*

The trustees submitted the following for the year ending December 1, 1880:

Loaned to T. J. Truscott \$1,000 at 8 per cent. interest from date ;
March 4, 1880, rented Fair grounds for pasture to January 1, 1881,

for \$75; collected note of J. L. Harris, \$216; invested in new Viets hotel, \$250.

JOHN WALZ,

J. A. COOPER,

T. J. TRUSCOTT,

Trustees.

All of which reports were referred to the auditing committee.

The president appointed D. M. Schnee, L. Pelham and Dr. Wm. P. Ford, auditing committee. On motion the meeting adjourned to the 15th day of December, 1880.

WEDNESDAY, December 15, 1880.

Pursuant to adjournment, the society met, and a quorum being present the meeting was called to order by Wm. Richards, vice president. The roll of officers called and all present except the president and general superintendent. The meeting proceeded to the election of officers, when the following members were elected to serve for the ensuing year: John B. Elliott, president; Wm. Richards, vice president; F. D. Bolton, secretary; A. H. Fretageot, treasurer; Edward Highman, marshal; Henry Pote, general superintendent; Henry Hayden, Isaac Cowgill and Virgil Johnson, trustees.

On motion of D. M. Schnee, the vote by which the report of the Trustees was referred to the auditing committee at the previous meeting was reconsidered.

When on motion of H. P. Owen the report was received and concurred in.

T. J. Truscott submitted an amendment to the constitution, changing the time of regular meetings from the first Wednesday in June and December, to the first Saturday in April and November. Which lies over under the rule until the June meeting.

Frank D. Bolton offered an amendment to the by laws of the society, by adding to section 3, of article 12, that the trustees shall make no investment, appropriation or loan of the funds of the society, unless instructed to do so by a majority vote of the members present at a meeting of the society.

On motion the meeting adjourned.

The following will show the financial condition of the society:

Amount loaned at 8 per cent. interest.....	\$1,000 00
Amount interest due December 22d.....	80 00
Amount invested in hotel.....	125 00
Amount cash on hand.....	231 47

\$1,436 47

FRANK D. BOLTON, *Secretary.*

PORTER COUNTY.

The tenth annual Fair of the Porter County Agricultural Society was held on the Fair grounds adjoining the city of Valparaiso on September 29, 30, and October 1, 1880. The weather was favorable. The show was good and the attendance about as usual; the receipts sufficient to pay expenses and premiums in full.

The show in all the departments of stock was not only equal in numbers to former years, but was superior as to character.

The display of fruit was equal to any former year, and much better than last year.

The poultry show was good and competition lively.

The display of machinery, farm implements, wagons and buggies, was very good.

The speed ring was much better than former years.

Hog cholera has made its appearance in many parts of the county, some farmers losing a greater portion of their fattening hogs.

FARM PRODUCTS.

Wheat, corn, oats and potatoes, an average crop, with a fine fruit crop. There was an abundant yield of all kinds of grass.

The six cheese factories all did a good business this season, all being run to their full capacity. Our agricultural interests are on the increase, and as a consequence our farmers, merchants, mechanics and traders are all in good spirits, and all rejoicing at the general prosperity.

REASON BELL, *Secretary.*

PULASKI COUNTY.

The seventh annual Fair of the Pulaski Agricultural and Mechanical Association was held at Winamac, September 21 to 24, inclusive. While the list of entries was not as large as last year, the interest manifested by the farming community was much greater than ever before. There was a larger number of horses on exhibition this year than at any previous fair, and the stock showed a decided improvement.

The association consists of about fifty members and is free from debt. The officers are live business men, and we hope to be able to report for next year the best fair our county ever had.

Our wheat crop of 1880 was excellent, though not so good as that

of 1879. The number of acres sown this year is much greater than usual, and the prospect for a good crop next year are very flattering indeed. The farming interests of our county are decidedly on the increase. Our manufacturing facilities are good, but have not, as yet, been utilized to any great extent.

The improvement in our county seat this year, in the way of buildings, has been extensive, and we are proud to note that we have as fine a business block as can be found any where in the State. Taking all in all, we think our county will compare favorably with any of our adjoining counties.

A. D. PERRY, *Secretary*.

PUTNAM COUNTY.

Putnam County Agricultural Society held their twenty-fourth exhibition September 6, 7, 8, 9 and 10, 1880.

The grounds are large and finely situated. The improvements are as follows: A high board fence enclosing the grounds; mechanic's hall, produce hall, floral hall and all other buildings necessary, with a sufficient number of stalls to accommodate horses and cattle, and pens for sheep and swine; a splendid half-mile track for speed horses.

Taking in consideration the short time the grounds have been occupied, the accommodations are first class.

The Fair, this year, taking the disadvantages under which it has labored into consideration, was a success. The campaign interfered with its success in a measure, there being a joint discussion on the principal day, which took away the crowd; also, several small fairs through the county tended to decrease the attendance.

The pro rata paid was better than was anticipated, and the outlook for next year is very promising.

The show of stock this year was greater than it has been for several years, and all the halls were well filled with a good variety of articles of a fine quality.

The display, taken altogether, was a fine one, and would be a credit to any county in the State.

The coming year, our Fair will have no opposition from the township fairs, they having combined with us, and we expect to make the Fair one that will not only please those who attend, but one which will pay stock men to attend.

We expect to pay all premiums in full, and place our Fair in the front ranks of the county fairs of Indiana.

J. H. CROW, *Secretary*.

RANDOLPH COUNTY.

Our tenth annual Fair was held on the 15th, 16th, 17th and 18th days of September, 1880, inclusive. The weather was fair, show good and attendance little lighter than former years. Our receipts were not sufficient to pay premiums in full; we paid for all improvements, labor, etc., and seventy cents on premiums.

The show in all the departments was equal, if not greater, than former years. Fruit, poultry, mechanical implements, floral hall and all minor departments showed off to good advantage and was a credit to our good and prosperous county.

As a general thing our farmers all prospered during the year, and harvested bountiful crops.

The condition of our organization is good, and bids fair for success during the ensuing year.

W. MOORE, *Secretary*.

RIPLEY COUNTY.

The Ripley County Agricultural Association held their seventh annual Fair on their grounds at Osgood, August 17, 18, 19 and 20, 1880. The weather was favorable for the first time since our organization, and our Fair a complete success in every respect. We were honored during the Fair with the presence of several distinguished visitors, among the number our lamented Governor Williams, and Adjutant General George W. Russ. The Governor delivered an address on agriculture, closing with some excellent advice to the young, which was well received.

The department of live stock furnished one of the leading attractions during the Fair. Some of the finest show cattle, sheep and hogs in the land were on exhibition, and the competition sharp.

The poultry department was well represented, showing an improvement over former years.

The display in the floral and mechanical halls was better than ever before.

The society made some radical changes in the appearance of their grounds, during the year, by the erection of a large mechanical and agricultural hall. Many stables, stalls and pens were built for the accommodation of stock. Our magnificent half-mile track was put in fine condition, and a seating capacity for over three thousand persons erected.

The society own their grounds and improvements, are out of debt and have money in their treasury.

WILLIAM R. GLASGOW, *Secretary*.

RUSH COUNTY.

In this, my line of duty in making our annual report of the condition of the Rush County Agricultural Society at its last exhibition, I append a statement of number of entries, receipts, etc., the character of the stock exhibited, and in fact every department was up to the spirit of the age.

The receipts are a poor index of the number in attendance, as three hundred stockholders, with their families, save males over twenty-one years of age, enter the gates free of charge. A political year, with its numerous fandangos, always to some extent curtail the fullest attendance to county organizations, whilst to State fairs the contrary is the effect, as all appointments are made subservient to those State exhibitions. All well conducted fairs are the most healthful stimulus the farmer and artizan have to further them on in their work of progress, which has proved a marvel in the last decade, and it is well it is so, for famishing would be the result of the exertions of every other laudable calling did not mother earth reward the toil of the husbandman. And I feel I make no digression nor do no one injustice when I would urge the farmers throughout this land to claim equal laws, equal protection to their several industries, under the genius of our government. Monopolies and aristocracies should not be encouraged or fostered, for when so the toiling millions foot the bills. L. LINK, *Secretary*.

SHELBY COUNTY.

The Shelby County Joint Stock Agricultural Association held their seventh annual Fair, near Shelbyville, during the first week in September, 1880. The display in the floral hall, most all of which was contributed by the ladies, was fully equal if not better than any of our former years. The ladies, not being voters, were not carried away by the excitement of a political campaign. The display of horses, cattle, hogs and sheep was very good. The number of entries in the different classes were less than an average, yet the quality of those exhibited were equal to any ever placed on exhibition. The weather was very favorable, and the attendance large during the entire week. Our receipts were sufficient to pay all expenses, and premiums in full, and leave a balance of over seventeen hundred dollars. We have, each year since our organization was formed, made an effort to hold our fair over until Saturday evening,

and as a result our gate receipts on Saturday have never been under seven hundred, and as high as fourteen hundred dollars. All of our fairs have closed leaving us, after paying all expenses in full, a surplus from four to twenty-two hundred dollars. Had it been our custom to close our fairs on Friday, as most all agricultural associations do, there were several years that our expenses would have exceeded our receipts, and we would have been compelled to borrow money to pay premiums in full. From past experience we can earnestly recommend agricultural associations to hold their fairs over until Saturday evening. There are many items of expense, not increased by so doing. When farmers and mechanics appoint meetings or take a holliday, it is always on Saturday.

The condition of agriculture in our county is prosperous and progressive. Our farmers are taking advantage of the best means of cultivating the soil. Our wheat crop was very good. The quality being above the average. The acreage now sown is equal to last year, and went into the winter in good condition. Corn—the yield was not large, but quality good. Oats was a failure. Hay an average crop. Fruit was fair and of average quality. Vegetables of all kinds were good and fully up to the average.

A. J. GORGAS, *Secretary*.

STEBEN COUNTY.

The Steben County Agricultural Association held its fifth annual Fair on their grounds one mile north of Angola, on the 28th, 29th and 30th of September and October 1, 1880. The fair was a success, though it was cold and disagreeable on the first and second days, and rained in the forenoon of the last day. On the third day we had an immense crowd, the weather as fine as could be. The exhibition of cattle and horses good; better than last year. In sheep good; about the same as last year. In hogs not good, but about the same as last year. The display of fruits was exceedingly good; double that of any previous year. The display of field crops good; also, that of machinery, farm implements, wagons, buggies and sleighs.

The display in floral hall surpassed that of last year, both in artistic arrangement and in number of entries.

The speed ring about the same as last year; not a success.

The condition of agriculture in our county is good. Most of our farmers take some agricultural journal, and our State and county

papers have a farm department. By so doing, our farmers are becoming posted in all that pertains to their business.

Our wheat was large and of good quality. Corn a fair yield and good quality. Hay, oats and potatoes good. Our farmers hardly ever fail to have a fair crop. Our farms are mostly sandy and gravel soil, and rain and drought do not effect it so much as in other parts of the State, and we have a great many small lakes that protect from frosts.

B. F. DAWSON, *Secretary.*

TIPPECANOE COUNTY.

The annual Fair of the Tippecanoe County Agricultural Association for 1880, was held at Lafayette on the 30th and 31st days of August, and the 1st, 2d, 3d and 4th days of September, and notwithstanding the extreme heat and heavy rains of the first three days, proved a complete success financially, and in the exhibits in the various departments.

While the horses, cattle, sheep and swine exhibited were not so numerous as at the Fair of 1879, they were first-class in every particular, and made a better display than ever before; and in the poultry, agricultural, horticultural, mechanical and other departments, the display has never been equaled.

The condition of agriculture is not so favorable, on the whole, as in 1879.

The wheat crop was of large yield and excellent quality.

Corn. Not over half a crop, and poor in quality.

Oats. Generally a failure.

Hay. While there was only a moderate yield, the quality is excellent.

Potatoes. In yield, almost nothing; in quality, fair.

Cabbage. Of no account whatever.

Fruit. Generally abundant and of good quality.

Secretary.

TIPTON COUNTY.

The third annual Fair of the Tipton County Fair Company was held on its grounds, conveniently located one-half mile southwest of the town of Tipton, 21st to 24th of September, inclusive. The grounds are located on the banks of Cicero creek, with excellent water facilities.

The Fair was successful in all its departments. The live stock show and speed ring were especially interesting features of the Fair. The display in floral and fine art halls was creditable, but fell short of last year's exhibition.

A great interest in poultry has recently grown up in our county, and the show in that department was a large increase over last year. Almost every variety of domestic fowl, from the mammoth turkey, the Plymouth Rock and the proud black-breasted game cock down to a number of varieties of bantams. In addition to the domestics were wild geese, bald and golden eagles, horned owls, etc.

The business men of our town contributed no little to the success of our fair by the display they made of their goods and wares.

The crops of this county for the year 1880 were good in the main. Corn is the staple crop, which was about one-third short. Wheat was more than an average. Oats and grass were good. Potatoes short. Fruit light. Hog crop was large in the number shipped, but light in weight. The cholera prevailed in some parts of our county, but not to an alarming extent. A greater interest has been taken of late years by our farmers in breeding and raising fine cattle and sheep. Several good herds of short horns are now to be seen in our county.

The gravel road mentioned in last report has been completed from the county seat to the county line north, a distance of eight and one-half miles, and two more granted, with fair prospects of several more. We have, indeed, reached the era of improvements, ditches, better roads, macadamized streets in our county seat, and brick and mortar may be seen going up throughout our towns and county, and the sound of the saw and hammer heard in every direction.

WILLIAM BARLOW, *Secretary.*

VIGO COUNTY.

The society has prospered during the year. Our Fair was well attended, and the display good. Barnum's show came to the city on our principal day, and was packed full, both afternoon and evening—thereby reducing our anticipated receipts one thousand dollars—which compelled us to pay part of our premiums "pro rata," which, however, has been our established custom for several years. We offer liberal premiums, payable "pro rata," and pay as high a per cent as we can. This, we believe, is better than low premiums paid in full.

We, this year, allowed exhibitors to make as many entries as they

wished with the same article or animal, which seemed to work well.

The Terre Haute Horticultural Society again had control of the fruits, flowers, bread, butter, cakes, etc., and that department was a success.

As heretofore, we had good trials of speed every afternoon at 2 o'clock. We gave \$1,000 in premiums for speed, but required five entries for each race, at ten per cent entry fee, which secured to us one-half of the purse before the race began.

The people all seemed interested in the races, and for that part of the day nothing else is attended to. The crowd comes to see the races.

We never allow gambling on the grounds. This year we allowed one stand for selling beer, and required it to be open with no back rooms or curtains, so that every one could see what was going on. No other liquors were sold, and there was not an arrest made on the grounds during the Fair. Our justice of the peace had his office on the grounds during the week, but not a single case.

Our crops this year have been good, all but late potatoes, which were a failure, except where they were grown under straw. Corn was good, except in the Wabash bottoms, which was drowned out as late as July 1. Three plantings were made, but all were destroyed. Wheat was a good crop, but not equal to the crop of 1879.

Our city has grown rapidly during the past few years, and now stands third in size in the State. JOSEPH GILBERT, *Secretary*.

WABASH COUNTY.

The twenty-eighth annual exhibition of the Wabash County Agricultural Society was held on the Fair grounds, in the city of Wabash, September 7, 8, 9 and 10, 1880, and was a grand success in every respect. The ground purchased by the board of directors in 1879, and added to the already fine grounds of the society, makes it one of the very prettiest grounds for agricultural purposes in the west. Our board built a new track the past season, which adds much to our exhibition in the way of speed; a new amphitheater and a great many other improvements, very much needed.

The show of stock in 1880 was some better than any season past; in fact, our farmers are raising the very best of stock.

The weather was good all during our Fair, nothing to mar the pleasure of visitors.

The last harvest of wheat was very good; the best ever in the county, but all the crop was very light.

Our farmers take quite an interest in the breeding of fine poultry. Improvements are made each year in this department.

GEO. W. PAULING, *Secretary*.

WARREN COUNTY.

The Warren County Agricultural Joint Stock Company held their seventh annual Fair at West Labanon, September 6 to 10, inclusive, and since its organization has endeavored to sustain and promote the agricultural and manufacturing interests of the county. The grounds, containing thirty acres, are under good fence, beautifully shaded, well watered, provided with good stalls and buildings common to such grounds.

Political excitement, and the great number of *grand rallies*, together with two neighboring fairs held on the same week, did much toward lessening the attendance. The entries of stock, although not so large as in some former years, yet in quality showed a marked improvement, especially is this so in cattle, sheep, hogs and poultry. A fine herd of Jerseys were shown by Mr. H. D. Thomas, but the short-horns far exceeded in numbers and quality. In hogs, we noticed a very decided improvement—less bone and more flesh, early maturity and readiness to fatten at any age, seeming to be the objects in view, and sought for by breeders. The breeds known as Berkshire and Poland China were more largely represented than others. Hog cholera has done little damage here for eighteen months, and we are in hopes that in the future we may not be bothered with it.

Trotting, and other descriptions of fast horses, are receiving much attention by our people, but the Percheron, Clydesdale, Coberg and other heavy draft horses are received with more than ordinary favor.

The display of vegetable and root-crops was much greater than at any former fair, and the available room was well occupied as was the department for grass and seeds.

Fine fruit was quite a leading feature of the fair this year, and it was very noticeable that a most commendable rivalry exists among our fruit growers to produce the very best.

In the floral department there is a constant increase in interest, and an advancement in culture of choice plants and beautiful flowers is no longer a rarity in this county, and the idea that the beautiful is useful, is sought to be realized by those devoted to the culture of flowers more than any other interest in our community.

In the mechanical department, including implements and farm machinery, textile fabrics, leather, cloth, wood and iron, the displays were far in advance of any former years.

Fine art and ladies' work were mostly monopolized by the ladies. The show was really grand and proves a steady advancement in design and workmanship.

Notwithstanding this was the "off" year for fairs, ours was a success financially, and after paying all premiums in full, leaves about five hundred dollars in the treasury.

JAMES C. MILLER, *Secretary*.

WARRICK COUNTY.

The Warrick County Agricultural and Horticultural Society held its twenty-third annual exhibition October 13 to 16, inclusive.

The grounds, consisting of twenty acres, are situated one mile west of Boonville, on the Evansville and Southeastern Railroad. Said grounds are enclosed with a good substantial fence, beautifully shaded, well watered, and provided with a large amphytheater, capable of seating several thousand persons. There are also three nice halls, and plenty of good stalls and pens for all kinds of stock. The exhibition this year excelled those of former years, especially in the quality and number of stock.

The horse department was well filled, consisting of fine stallions, brood mares, draught horses, saddle horses, harness horses and especially speed horses.

The cattle show far excelled anything we have ever had, consisting principally of short horns.

The show of sheep and hogs was excellent.

Peter Taylor, of this county, is making a specialty of importing and breeding fine wool sheep, short horn cattle, Berkshire and Poland China hogs, and deserves great credit for the interest he has taken to improve the stock of our county, and for his untiring energy in building up this department at our fairs.

The poultry department made a very creditable show.

The floral hall, always the center of attraction at our fairs, was not so well filled this year, owing to the rain and bad weather.

The display of agricultural implements was excellent.

CONDITION OF AGRICULTURE

The soil and timber of this county are good. Crops consist of corn, wheat, oats, tobacco, clover, grass, fruits, and vegetables of all kinds.

This county is almost entirely underlaid with splendid coal, and with the present railroad facilities is very profitable to the miners.

The crops of this county were very good last year, and the prospects this year are excellent.

The exports in wheat, hay, hogs, cattle and tobacco have been, and are now, very good, and are a source of great wealth in this county.

The financial condition of this society is good, having \$915 now on hands and no outstanding debts. W. M. R. WILSON, *Secretary*.

This year will long be remembered by our people, as a prosperous and fruitful season; one noted for the uniform good health of the people, as well as the absence of destructive storms and floods.

The wheat crop was good, berry plump and quality first rate. Harvest early and secured in prime condition, and nearly all farmers profited by past experience, either stacked or put their grain under shelter at once.

Corn. Two-thirds crop, sound and good.

Hay. Fair crop.

Fruit. Abundant, except peaches, which was only one-third crop.

The "crop" of pork was large but not as fat as formerly. Many farmers feed large droves of cattle for spring market. The sale of beef cattle is rapidly increasing. Sheep husbandry is also paying well, and there are many more kept in this county than ever before.

Great quantities of coal are mined in this county, and the business is rapidly increasing.

This year also marks the era of the completion of a railroad through the county, thus giving much better market facilities for many portions of our county.

One of our greatest needs at present is a "tile" factory, all that is used is either shipped on cars or hauled a long distance in wagons, thus adding largely to the expense of draining our lands, notwithstanding which tile draining is fairly introduced, and perhaps no point in southern Indiana offers a better inducement for such a business than Boonville, the county seat of this county.

The demand for farm hands has been well supplied at seventy-five cents to one dollar per day, without board, and ten to fifteen dollars per month, with board. Harvest wages have averaged about \$1.25 to \$1.50 per day, with board. Our schools are good and prosperous, averaging nearly six months per year, and generally our farmers are doing well, which is shown by the miles of plank fence erected and many fine barns and farm houses built during the last year.

W. T. STONE, *Secretary*.

WAYNE COUNTY.

This county held its thirteenth annual Fair on their grounds near Centerville, on the 22d, 23d and 24th of September, 1880. The time was unfavorable on account of a large mass meeting of one of the political parties, being held at Richmond on the principal day of our exhibition, and also other circumstances and meetings. The attendance was small and the receipts fell short of the expenses. We paid but fifty cents on the dollar of premiums. The directors feel disposed to try again, and are determined to hold a Fair next September.

WM. F. KING, *Secretary*.

WELLS COUNTY.

The fourteenth annual Fair of the Wells County Agricultural Society was held near Bluffton, on the grounds usually occupied by the society, September 21, 22, 23 and 24, 1880.

It being campaign year it was hard to work up the agricultural interest in our county, and it seemed that fate was against us during the Fair week. On Thursday of our Fair, there were three prominent political speakers spoke in and near the town, and one of those being the "noted" B. F. Butler, every body seemed filled with a curiosity to see him, rushed to the grove where he spoke, instead of going to the Fair. Notwithstanding, we had a big day, and our receipts that day were over \$800, which crowned our efforts with success. The number of entries in the various departments were up to former years, and some departments far excelled former years.

The horse department was very good, having some of the finest draft stallions and colts that were ever exhibited in the county.

The cattle show was fine. We had a new attraction in cattle in this county this year, being a fine lot of Alderneys, exhibited by Robert Simonton and J. J. Amos, of Huntington county. We also had a fine lot of short-horns on exhibition.

Our swine department was good, but not as many entries as usual.

The sheep department was ahead of anything we ever had.

The farm and orchard products excelled in quality, if not in quantity, our former exhibitions.

As to floral hall, it was filled to overflowing, and had not enough room to display near all the articles brought there for exhibition. The ladies of our town and county are entitled to a share of the

credit for the success of our Fair. We also thank some foreign ladies for contributing to the exhibits in floral hall. If our men would all take as much interest in their departments as the ladies do, our county fairs would all be grand successes everywhere.

CROPS.

Our wheat crop last harvest was good in quality, but not up to last year in quantity.

Our corn crop was very poor, not over half crop, wet spring and dry summer cause of failure. Oats poor quality. Potatoes not half crop and small. Hay good in quality, but not as much cut as usual; all put up without rain.

The farmers are still continuing their good work of ditching and under draining, and the time is not far distant when Wells county will be one of the best farming districts in the State.

JAS. R. BENNETT, *Secretary.*

WHITLEY COUNTY.

Our county fair for 1880 was, owing to the high political excitement at the time, the first week in October, a partial failure, as compared with our success in 1879. Our association is in good shape. We are out of debt, have made good and substantial improvements this year, and have a balance in the treasury of about \$300. Our people, in a general way, take interest in our fairs. Wishing the agricultural interests success throughout the whole State.

ISAIAH B. McDONALD, *Secretary.*

BRIDGETON UNION.

The society held their nineteenth annual Fair in the town of Bridgeton, Parke county, Indiana, commencing August 23 and closing the 28th. The weather was fine during the entire week and the fair was a success in all respects. The show in all of the departments was good, especially was this the case in the woman's department. The fine art hall is large and commodious, but would not hold the goods placed on exhibition without piling on top of each other, and the committee had great difficulty in finding all the articles. The financial condition of the society is in good shape.

Paid all expenses and premiums in full, and have a small balance to commence the next year with. The condition of agriculture, within the district, is improving very fast. There is an Agricultural Society in each county composing the district. Parke county organizing and holding a fair in the year 1880, was the first for some time. There has been quite an improvement in domestic animals of all kinds since the organization of the society, and especially is this the case within the last two or three years in sheep. The notable improvement in some portions of the district is in wheat, drills being used both for fallow and in corn. The farmers are turning their attention to the cultivation of clover, following with wheat.

RECEIPTS AND EXPENDITURES.

Jan. 3, 1880, balance on hand	\$ 195 84
Gate Fees.....	1,452 26
Privileges sold.....	389 20
Feed sold.....	104 89
Entry Fees.....	69 00
Wood and Lumber.....	3 55
Total receipts.....	<u>\$2,214 74</u>
General expense orders.....	\$ 704 38
Paid on premiums.....	1,298 50
Total expenses.....	<u>\$2,002 88</u>
Leaving a balance of.....	\$217 62

D. SEYBOLD, *Secretary.*

CAMBRIDGE CITY AGRICULTURAL AND TROTTING PARK ASSOCIATION.

We did not hold any Fair in 1880, and it has not been definitely settled whether we will hold one in 1881. Below I venture to give my ideas of how Fair grounds should be owned and controlled viz:

The State Board of Agriculture should request the members of the Legislature to enact a law allowing all cities and towns to own their respective grounds to be used for all public purposes; such as a park, for stock sales, etc., and I think that it would prove beneficial to all pursuits.

GEO. W. SHULTS, JR., *Secretary.*

DUNKIRK UNION FAIR ASSOCIATION.

This association was founded on the ruins of the Dunkirk Union Agricultural and Mechanical Association, which became involved, and ceased to exist in October, 1879. The new association was organized on the stock principle, and began its existence with four hundred dollars (\$400) in the treasury. Our first exhibition was rather slender, as we naturally expected, owing to the bad "odor" the old association left. Consequently, the receipts were not sufficient to liquidate premiums and expenses, accordingly recourse was had to the reserve fund, which enabled us to honorably discharge all our obligations.

The condition of agriculture is improving. A mania for ditching prevails largely throughout this neighborhood, two tile mills here failing to furnish tile sufficient to meet the demand. A pleasant rivalry seems to have sprung up among farmers as to which will drain their lands the most thoroughly. Already the fruits of this enterprise have begun to appear in the shape of increased crops and more satisfactory tillage.

The outlook for our next Fair is very promising, the indications now being that with propitious weather we will be enabled to pay dividends on stock, after paying premiums and expenses.

JOHN T. SUTTON, *Secretary.*

EDINBURG UNION.

In connection with the statistical information of the condition of the Edinburg Union Agricultural Society, I submit the following report of the state of agricultural affairs in this district during the year now closing:

We have again been favored with a bountiful crop of wheat; a crop which in ordinary course of events would have been considered very large—but which, in comparison with the extremely heavy yield of 1879, showed some falling off—yet the increased acreage made the total product nearly as large as the preceding year, and the quality was all that could be desired. The Fultz continues to be the leading variety, and is improving in milling qualities, yet it does not nearly fulfill the requirements of new process milling, and the demand is urgent for some variety of hard winter wheat that will suit millers and come somewhere near the Fultz and other soft varieties. I would urge the necessity of research and experiment in this direction. There is no reason why all our

wheat should not be shipped in a manufactured state, thereby saving the cost of transportation on the offal, which could be fed to stock to good advantage, as is now done with the entire corn product of this section, and the individual or society which will introduce such a wheat will be deserving of the lasting gratitude of the farming community.

There is a growing tendency each year to put more land in wheat and less in corn, or other crops that require much working. The perfection to which the self binding reaper has been brought already enables the farmer, with the assistance of his family or ordinary hired hands, to do the entire harvesting of the crop, without employing a large number of extra hands at extravagant wages; and materially lessens the cost of production. The crop once stacked, it can be threshed at leisure, and as the past three years have been unfavorable for the corn crop, we may look for yearly increased production of wheat until the price falls below a paying basis.

The corn crop of 1880 is of most excellent quality, but the summer drought cut short the yield. Fifty bushels per acre is a large crop for this season, and the average is not over thirty-five bushels, which is about two-thirds of our usual amount.

Three starch factories and three hominy mills, within a radius of twenty miles, consume the entire corn product of this district, at prices which leave the farmer little room for complaint.

Other crops than these make but little figure in our statistics. Oats were a failure. Rye is not grown here to any extent. Barley was short, but realized a paying figure. Potatoes were about a half crop. Hay crop short; clover seed but little saved. Prices have ruled so low that farmer's claim it will not pay to work with it. Our fruit crop was fair, but not large.

In cattle this section maintains its reputation, our beeves bringing always outside quotations at home, or eastern markets. A large number of hogs are also raised, and, as packing is now carried on at all seasons, they can be marketed, without loss, at any season.

Altogether we have realized a fair share of prosperity, and have good reason to congratulate ourselves on our progress.

C. M. A. HESS, *Secretary.*

FOUNTAIN, WARREN AND VERMILLION.

The Fountain, Warren and Vermillion District Agricultural Society held their twenty-first annual Fair on their grounds at Coy-

ington, September 21 to 24, inclusive. We had a much larger attendance than at any previous Fair. It rained one evening at the commencement of the Fair, which laid the dust and made the air pleasant.

The show of stock was not as good as formerly, but the display in agricultural and horticultural halls, and textile fabrics were better than we ever had, and will cause us to erect new buildings. We have purchased seven and one-half more acres of ground, and last year erected a new sheep and hog building which cost over \$700. We have run our Fair on strictly temperance principles for three years, and we owe our success to that fact. The grounds contain thirty acres, half mile track, commodious amphitheater, beautiful shade trees, and the best of pure water. Messrs. Benj. Bilsland and Col. James McMannomy, having served as directors for twenty-one years, have resigned for younger men. To their management we owe, in a great measure, the success of the Fair, as in the whole twenty-one years we have not failed to pay all premiums as advertised in cash, and have a surplus of one thousand dollars in the treasury.

The wheat crop in our district was not as good as 1879, but a greater amount was raised, more acreage being planted.

The corn crop was not good, as the Wabash river, which is the boundary line of the three counties, was out of its banks five or six times during the spring and summer, causing a partial failure to the corn crop.

The oats and potato crops were failures on account of the dry weather. Not enough potatoes were raised to supply the home demand.

Fruit crop good. Apples above the average, large quantities being made into cider and vinegar.

Horses, cattle and hogs are the principal stock dealt in. There was but little hog cholera last year compared to previous years.

The soil of our counties is varied—river bottom, hilly, upland and rich prairie, and are the best watered counties in the State.

Plenty of gravel and a few gravel roads.

Large quantities of good stone coal are mined seven miles south of Covington for Chicago market.

Fourteen tile manufactories in the three counties.

Sheep industry a failure, as the dogs kill more than are raised.

Rail fences are still in use in the country, and barbed wire on the prairies.

HOMER SEWELL, *Secretary*.

HENRY, MADISON AND DELAWARE.

The list of entries at our last annual Fair, which was held in August, was not quite so large as in some former years, but very good. The premiums paid were about nine hundred dollars. The society paid four hundred dollars on its debt, leaving an indebtedness of only one hundred and fifty dollars, which amount would have been paid this year had we not met with a loss by fire that resulted in burning considerable fencing and stalls.

The condition of agriculture in our district is gradually improving, and the science of farming is becoming better understood. A great many of our farmers take some leading agricultural papers or journals, and thereby keep themselves posted in all the improvements of farming. The wheat crop of 1880 was large in yield and fine in quality. The corn crop was much damaged by wet weather in the early part of the season and the drought in the latter part. Potatoes were almost a failure. Garden products were quite so. The apple crop was fair, as also small fruits.

The farmers in this district seem to be giving more attention to the raising of cattle, hogs, horses and especially sheep. Altogether the past season has been very favorable to the farmers, and the society seems to be in a healthy and flourishing condition. All branches of trade have been good. Merchants have had a good trade, and mechanics all they could do.

J. D. FARRELL, *Secretary.*

KNIGHTSTOWN UNION.

The twenty-eighth annual exhibition of this Society was held on the 31st of August and 1st, 2d and 3d of September, 1880. This being the "rainy week" of the season, we shared alike with all those exhibitions which came at that time, in the falling off of receipts and display in some of the departments, yet our success was very good, but not what the officers were expecting from the indications previous to the opening week.

We do not look upon the large amount of money received and handled as the best test of progress and benefits of these exhibitions, but it is the interest manifested by the exhibitors, and the perceptible signs of progress made in superior stock, products of the soil, improved machinery and advancement in all branches of industry, that make them especially useful to the young men who are entering upon their allotted or chosen callings.

One suggestion, seemingly not out of place in this report, to our annual Delegate State Board: We meet for the purpose of considering the best interests of the State Fair, and choosing its officers. The delegates are sent by the various societies, and are their direct representatives and are, or should be, interested in their local organizations. Now, instead of occupying *so much* of the time of the session in discussing culture of crops, treatment and grades of stock, etc., etc., which is so fully, interesting and ably set forth through the journals specially devoted to these and kindred branches, and which all can read at our leisure and profit, let the time be divided with questions concerning the best mode of management of the State Fair and the various county and district societies. Let the delegates report any new features they may have tried and its success or failure, so that all may be benefitted by their experience. These matters would certainly attract the interest of the entire board and be of direct benefit to those whom they represent.

GORDON BALLARD, *Secretary.*

LOOGOOTEE DISTRICT.

The annual Fair of the Loogootee Agricultural and Mechanical Association was held September 14, 15, 16, 17 and 18, 1880. The weather during the whole week was very favorable and pleasant, but in consequence of the great political excitement at the time, it was impossible to get the attention of the people until the latter part of the week, political meetings being held in a short distance of the grounds during every day of our Fair. However, taking all this into consideration (which is the most we ever had to contend with), we feel like congratulating ourselves on our success this year. We spared no expense in making our grounds attractive, and we were told by visitors "Your grounds are the handsomest and in the best order of any in the State."

Our entries fell short in every department except those usually filled up by the ladies.

The floral hall was filled with the finest and richest articles ever exhibited in it, which proves that our ladies have not abated in their interest in our exhibition.

Our receipts this year did not enable us to pay quite in full. We cut the premiums 20 per cent. for the first time in four years, but we do not expect this will ever occur again. We think our financial condition is as good as could be expected—having labored under indebtedness and other disadvantages for several years—and we

now own ground which we value at \$500, and our indebtedness is only about eighty or ninety dollars.

The crops in this community this year were good. We have raised plenty of everything that is usually produced by our soil.

We think our society and also the industrious part of our community are in a prosperous condition. C. S. Wood, *Secretary*.

NEW ROSS.

Our exhibition was held on August 16 to 20, inclusive, and was a decided success, the receipts being in excess of all demands against our organization—a deferred hope realized, after four years of hard struggling against adversity, and many other obstacles that loom up in the face of agricultural societies.

The number of entries in the live stock department was five hundred and eighty-seven, and the amount of premiums paid on the same, was one thousand six hundred and fifty-eight dollars.

In class 6, sweepstakes for horses, there were forty entries on stallions alone, some of which would have done credit to a State organization.

The cattle department was represented with stock owned and bred by J. W. McCowai, D. Evans, Elijah Clore, J. Baugh & Son, J. P. Hyner & Son, and other breeders of thoroughbred stock.

Our Fair grounds are in good condition, and peculiarly adapted for the purposes for which they are now used, there being a gradual elevation from the speed ring eastward, thereby affording all a splendid view of the speed ring during the races, without the necessity of being half smothered in an over filled amphitheater, as are most of fair grounds. While the buildings on our grounds are not fine, they are substantial and durable, they being well framed weatherboarded and roofed with pine shingles.

In conclusion, there is one question to which I would call the attention of your honorable body. Why do so many agricultural societies offer more money in premiums than they can pay in full, when all agree that there is no one evil that contributes so much to the destruction of agricultural societies as a failure to pay all contracts in full?

By a careful examination of my book for the past three years I find the following to be true: That 13½ per cent. of premiums offered are not entered for, and as a rule all agricultural societies deduct 10 per cent. of premiums when paid, and one-half of one per

per cent. of premiums unclaimed, making a total of 24 per cent. to be deducted from the amount of cash premiums offered.

The above I think would be a safe calculation for all executive committees who prepare premium lists. To illustrate, say a committee has prepared a premium list offering three thousand dollars in cash premiums. The first thing to be considered is how much money will it require to pay the premiums. If my calculation be correct, it would require twenty-two hundred and eighty dollars to pay the premiums offered, exclusive of all other expenses. The fact I want to impress on committees who prepare premium lists is this, that they should never offer more in premiums than in their judgment the society would be able to pay with the receipts of the exhibition for which the list was made. And to arrive at a proper solution of this question I think committees who prepare premium lists should take the average receipts of former years and compare it with the list, and should the premiums offered be greater than the average annual receipts, it would, in my judgment, be wise to reduce the list of premiums.

I hope the board will take up the above question so feebly presented and fully develop it and thoroughly impress it upon the minds of the delegates in such manner that it will check this growing evil of societies offering more money in premiums than they can possibly pay. I hope you may have a good representation in the board at this session, and through your wise deliberations a bright era may dawn upon the great agricultural interests of our country.

T. A. ADKINS, *Secretary.*

NORTHEASTERN INDIANA.

Late in the winter of 1880, a storm blew down the fence on the east side of our grounds, including a large number of cattle stalls. The judges' stand was destroyed at the same time. These have all been rebuilt at considerable expense, but in a more substantial manner, and at a cost of over one thousand dollars. Some underdraining was also done, and another well added to the number we already have. The weather during the entire week of the Fair was pleasant, but attendance was not quite so good as last year, owing, probably, to the fact that several political meetings were in progress in this and adjoining counties at the same time.

Tickets sold on Thursday showed a little over 8,000, as against 10,000 in 1879, on same day of the week.

Entries were very numerous, being in all classes 2,165, an increase of 181 over the number of entries in 1879.

Articles on exhibition were unusually good, especially in floral hall, and in stock and machinery. The exhibit in canned fruits, jellies, etc., in the ladies' department, was unusually large, and the articles of excellent quality—the best we have ever had in this line.

The total receipts for the year are..... \$5,821 33

Total expenditures..... 5,758 04

These expenditures include,

New stables and fence..... \$560 00

New sheep stalls..... 310 00

New judges' stand..... 110 00

One well, about..... 100 00

CROPS.

Wheat was two-thirds to three-fourths as good as usual, and quality not equal to other years. Corn, owing to wet season, about three-fourths of a crop. Oats, about same as corn. Potatoes, poor. Apples about two-thirds as good as usual. Peaches, fair. Small fruits, generally abundant, and of good quality.

JAMES A. BARNES, *Secretary*.

PLAINFIELD AGRICULTURAL AND HORTICULTURAL SOCIETY.

The past season has been one of average prosperity in agriculture in this vicinity.

Corn half crop; wheat good; hay average in quantity and quality; oats poor; grass fair.

Vegetables—Potatoes a total failure; sweet potatoes good; cabbage one-fourth crop; turnips poor; garden products good.

Live Stock.—Horses, cattle, hogs and sheep have done well. Poultry fair.

Entomology.—Insects were more numerous than common, and their depredations more extensive.

Ornithology.—Birds of all kinds fewer in number than usual.

W. H. WHITE, *Secretary*.

RUSSELLVILLE UNION.

The society held its twenty-fourth Fair near Russellville, Putnam county, August 23 to 28. Our former fairs for the last year or two

have had to contend with a great deal of rain. It was the reverse at our last exhibition, the weather being very warm and dusty, which made it rather disagreeable. Notwithstanding, our fair was a grand success in every particular. Our premiums were liberal and paid in full. The total number of entries at our last exhibition was thirteen hundred and twenty.

The show of horses was excellent; being hard to beat at any county or district fair. The cattle show was the finest ever held on our grounds. J. Gains & Son, of Illinois, had their fine herd on exhibition; also, E. Clore, of Fountain county, who carried off several premiums at our last State Fair. He had two herds on exhibition. We could mention others who had excellent stock there. Our hog show was fine. The different breeds exhibited were Chester White, Poland China and Jersey Red. The show in the sheep department was not so good as that of some of our former exhibitions. The display in the floral hall was fine. All available space was occupied, and filled to its utmost capacity. The exhibition in the other departments was creditable, but might have been better. Taking the exhibition as a whole, it was a success. The display in the agricultural department was the best ever seen on our grounds. Self-binders, reapers, mowers, drills and plows; in fact, everything the farmer wants to till the soil was on exhibition.

CROPS.

The crops of 1880 were not as good as the former year.

Wheat—Good as to quantity and quality.

Corn—Crop was short owing to wet weather in the spring, and want of rain when it began to shoot; about two-thirds of a crop was raised.

Oats—A failure.

Apples and Peaches—Good.

The crop now seeded is large, and was put in with great care.

Potatoes.—The crop was hardly an average, and the quality only fair. In many instances the tubers failed to mature.

There is growing an interest in our community at present in the dairy interest. There are agents established here to gather the cream from the farmers twice a week and send it to Indianapolis, to the creamery, which in return they receive more per inch for the cream than they could realize out of the butter, to say nothing about the trouble of making it. This is an industry that should receive the attention of the farmers, as they want to make the farm pay the best return for their labor. In conclusion, I may say that agriculture is in a fairly prosperous condition, and the farmers are, as a class, better off than any other portion of the community.

G. S. DURHAM, *Secretary*.

SOUTH-EASTERN INDIANA.

The South-eastern Agricultural Society is one of the fixed facts of Southern Indiana. It has come to stay. Our fair for 1880 was attended by copious showers, but the ardor of the members was not in the least dampened. Notwithstanding the inclement weather, and the fact that umbrellas and rubber boots were in demand, our fair for 1880 was a complete success. We have been holding fairs, as now organized, since 1867, and our last fair was, by odds, the best of the lot. We have held our fairs with empty treasuries, rainy weather and divided board of directors, but now we all have the good of the society at heart, and have, during the last few years, won the sympathy of the whole community and our success in the future is assured. The annual fair was the first week in September, 1880. Our experience, during the year, proved that good weather is essential to complete success in a fair. The first two days was very rainy, but to count the persons present during the remainder of the time would be to count the inhabitants of this and adjoining counties. Our receipts were sufficient to pay all premiums and leave a surplus in the treasury. All our departments were well filled, especially that to which the Granges contributed. The number of entries was double that of our last exhibition. Our speed track is entirely too small. The question of enlarging it has been for some time agitated, but in vain. It is due to the interest of our patrons that a larger track be constructed.

A special Grange premium was offered by some of our county officers, and the show was simply immense.

The exhibition in the agricultural department was worthy of notice. The corn, potatoes, wheat, etc., would have done credit to any fair in the State. The stock show was good. The horses on exhibition were fair. The cattle, as a class, were extra fine. The display of wheat extra good; there being more than sixty entries in this class.

The crops, the past year, taken as a whole, were above an average. The crop of wheat was probably the poorest, not being more than a two-third yield. Grass was good, but hay, as a staple article, is not grown to a very great extent in our county. The other fall and spring crops were about an average. The timber of our county is fast being used up. Walnut and oak are being shipped from our county in great quantities, and the time is near when timber for fencing or building purposes will be a thing of the past. We feel assured, from the interest manifested heretofore, that we can make our fair in the future a decided success.

WILL A. GREER, *Secretary.*

SWITZERLAND AND OHIO COUNTIES.

Success has almost invariably attended the fairs of this society, and in this respect our twenty-ninth annual exhibition held September 14 to 17, 1880, was no exception to the general rule, unless, perhaps, it was even better than its predecessors. Some had predicted that because of the numerous public meetings being held in all parts of the country, and the unusual political excitement pervading, that the attendance at the Fair would be small, and the people more noisy and ungovernable. The contrary proved true, the crowd was, perhaps, never larger, nor the order better. In the selection of officers, and in the entire management of the affairs of the society, politics are wholly ignored, which, we think, evinces the judgment and wisdom of our people. Our entries were 1,080. The show was good, particularly so in live stock, the agricultural, horticultural, mechanical and ladies' departments. We paid \$1,700 in premiums, expended \$400 in substantial improvements, have paid all claims against the society, and have in the treasury \$891.60.

Our premium list has been revised, and the following officers elected for the ensuing year: President, Harvey Jack; vice-president, J. W. Stewart; secretary, Wm. H. Madison; treasurer, John Shaw; marshal, Alex. Washer; three trustees and twenty directors.

Our next Fair, will be held September 13, 14, 15 and 16, 1881.

With grateful acknowledgments to the patrons and visitors of our fairs in the past, we shall ask and seek their continued favors, and hope for success in 1881.

AGRICULTURE.

In all the pursuits of life we observe a commingling of successes and failures, yet we have thought that there was no other occupation or avocation followed by man, more uncertain in its results, than that of agriculture. We sum up the results of the past year as follows: The spring opened very auspiciously; soon after the corn planting season we had a great amount of rainfall, which, upon our flat clay lands, drowned out, or prevented the tillage of the crop. After the middle of July we had very little rain, and corn on the hill lands was scorched and dried up. We think the yield one-third less than last year. The hay crop was unusually good, and commands a good price. There is not near as much raised as formerly; prices had been low and farmers had plowed up much of their meadow lands.

The wheat crop was very irregular, owing to time of sowing, the ravages of the fly, and other circumstances. Some very good wheat and some very poor; the average perhaps not more than six

or seven bushels per acre, and quality not the best. The yield of straw was large. Rye was almost a failure. The oat crop amounts to but little. The acreage of potatoes planted was very large; the average yield perhaps not more than forty to fifty bushels. Prices very good.

Fruit of all kinds was quite abundant. Peaches, the best for several years. Tobacco culture is rapidly on the increase in this district, and promises to become an important factor in our farm business. Our people are comparatively ignorant of the proper management and handling of this crop, but time and experience can remedy this. Bee culture is also a considerable business. The early season was good; the fall season unfavorable; owing to drought the yield of honey was light. The hog crop we think was rather less than last year, yet the production was large, and prices quite satisfactory. In fact, farm stock and farm products of all kinds bear good prices, and we think that we can see an upward tendency in the values of real estate. Clover as a fertilizer, is becoming more extensively used every year, and its benefits are always apparent. We predict its very general use in the near future, being much cheaper than commercial fertilizers. The dry weather last autumn delayed or prevented the seeding of wheat, and the prospect now is not flattering. The winter up to January, 1881, has been severe, making a brisk demand for forage and fuel. The health of our people has been good and no great casualty has befallen them this year. In general they seem to be hopeful, cheerful and reasonably prosperous.

WM. H. MADISON, *Secretary.*

THORNTOWN UNION.

The eleventh annual Fair of the Thorntown Union Agricultural Society was held on their grounds, one-half mile east of Thorntown, September 20 to 24, inclusive. The weather was pleasant and the society carried out its program with commendable promptness. A combination of circumstances, however, prevented us from having the success we anticipated. A large political rally within a few miles of us on Thursday attracted a great many persons who would otherwise have attended the fair; and this county having held one fair, and the adjoining counties having each had one, and in some instances two, together with the fact that farmers were far behind with their work on account of the long drouth, all combined to make our attendance small. Our exhibition, however, was fully up to the average. The number and character of the entries were

fully up to our expectations. The cattle and horse departments need more than a passing notice. We never had a better showing of good horses on our grounds. The speed ring was full of interest, the races all filling, and the trotting and pacing records mark low in the twenties. Our cattle show was immense. Over sixty entries being made. Such herds as Baugh's, Earhart's and Clore's, competing for our liberal premiums. The floral and agricultural halls were attractive features of our fair, both being well filled. Taken as a whole, our exhibition was first-class, and deserved a much better patronage from the public. Our grounds are held by lease. The society is entirely out of debt, and in a satisfactory financial condition, and we hope officers and people will work together in the future as they have in the past to make this association a benefit to the counties represented.

A. M. CORY, *Secretary*.

TERRE HAUTE HORTICULTURAL.

The society has had a successful year; the meetings have been held monthly, and always well attended.

On the 27th of May last we celebrated the fifteenth anniversary of our organization. We have done a good work, and there is plenty to do in the future.

At the annual meeting the following officers were elected for the ensuing year: President, Jos. Gilbert; Vice President, R. B. Pegg; Secretary, Mrs. L. C. Wonner; Treasurer, Mrs. T. Hulman, Sr.; Executive Committee, H. D. Scott, J. F. Soule, Mrs. Jos. Gilbert, Mrs. A. Pence, Mrs. Wm. Scholz.

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA—1880.

Name of Society.	President.	Address.	Secretary.	Address.	Acres in Fair Ground.	How Owned.	No. of Members.	Indebtedness.	Value of Grounds.	Value of Improvements.	No. of Volumes in Library.
Indiana State Board of Agr'l.	W. H. Ragan.	Clayton.	Alex. Heron.	Indianapolis.	88	Fee simple.	16	\$50,000	\$75,000	\$50,000	900
Allen Co. N. I. Fair Association.	F. P. Randall.	Ft. Wayne.	W. Rockhill.	Ft. Wayne.	69	Leased.	.....	None.	.....	.....	.....
Bartholomew Co. Agr'l Society.	S. R. Quick.	Columbus.	John Doup.	Columbus.	.....	Stock company	.....	None.	.....	.....	.....
Blackford Co. A., H. and M. Asso.	C. A. Rhine.	Hart's City.	John Noonan.	Hartford City.	24	Leased.	.....	643 06	.....	.....	.....
Boone Co. Stock Agr'l Society.	John M. Ball.	Lebanon.	A. C. Daily.	Lebanon.	24	Fee simple.	100	.....	1,500	2,000	.....
Cass County Agricultural Asso.	Geo. Zinn.	Logansport.	D. Tomlinson.	Logansport.	86	Leased.	89	None.	5,000	7,000	10
Clark County Agricultural Asso.	W. McMillan.	Charlestown.	A. J. Hay.	Charlestown.	16	Joint stock.	13	None.	1,000	1,500	.....
Clay Co. Ag. So. & Clay Trg'g P. A.	J. M. McKinnis.	Brasil.	P. F. Sharp.	Brasil.	20	Leased.	51	None.	4,500	.....	.....
Clinton County.	A. M. Johnson.	Washington.	A. F. Cabel.	Washington.	28	Stock company	30	None.	1,500	600	.....
Daviess County Agr'l Association.	W. W. Hamilt'n	Greensburg.	F. M. Weadon.	Greensburg.	20	By the society.	15	None.	3,000	3,000	.....
Dearborn County.	J. M. Graham.	Muncie.	F. Ellis.	Muncie.	41	By county.	83	2,185	7,000	3,000	.....
Decatur County Agr'l Society.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Delaware Co. Agr'l and Mech. Soc.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dubois County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elkhart County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fayette Co. E., I., A., M. & T. P. A.	J. N. Huston.	Connersville.	A. B. Claypool.	Connersville.	35 1/2	Fee simple.	13	None.	9,000	3,000	.....
Franklin Co. Joint Stock Ag. Asso.	W. A. J. Glide'll	Fairfield.	M. A. Mear.	Brookville.	30	Leased.	46	800	3,000	1,800	.....
Fulton Co. Joint Stock A. & M. Soc.	L. W. Shelton.	Rochester.	W. H. China.	Rochester.	20	Warranty deed	200	1,600	2,000	2,000	.....
Gibson Co. Hort'l and Agr'l Soc.	J. Davidson.	Hasleton.	J. C. Harlin.	Princeton.	26	Fee simple.	300	None.	2,583	2,500	.....
Grant County Agr'l and Stock Asso.	John Ratliff.	Marion.	D. S. Hugin.	Marion.	35	Fee simple.	46	1,500	2,000	1,200	.....
Greene County Agr'l Society.	Frank Stalcup.	Marco.	P. Schulze.	Linton.	18	Fee simple.	100	.....	500	1,500	.....
Hamilton County Agr'l Society.	J. E. Carson.	Cleora.	L. O. Clifford.	Cleora.	13	Leased.	150	800	.....	3,000	.....
Hancock County.	J. Q. A. Sieg.	Corydon.	C. Martin.	Corydon.	26	Stockholders.	206	None.	5,300	1,500	.....
Harrison County Agr'l Society.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hendricks County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Howard Co. Joint Stock Agr'l Asso.	T. M. Kirkpatrick	Kokomo.	A. N. Grant.	Kokomo.	23	Fee simple.	50	5,000	3,300	3,700	50
Huntington Co. Agr'l Society.	B. Simonton.	Huntington.	W. A. Jones.	Huntington.	26	Fee simple.	500	None.	3,000	8,000	.....
Jackson County Agr'l Society.	John Scott.	Brownstown.	J. H. Matlock.	Brownstown.	82	Leased.	.....	.....	.....	.....	.....

Jasper County Agr'l Society.....	W. K. Parkhoun	Ple's 'nt Grov	H. E. James.....	Bennetlaer...	20	Fee simple.	125	None.	800	1,200
Jay Co. A. H. and I. J. S. Co.	J. Gunt.	Gresue.....	G. W. Miller.....	Portland.....	40	99 year's lease.	400	4,000	3,500	
Jefferson County Agr'l Society.....	W. P. Graham.	Madison.....	G. S. Taylor.....	Madison.....	40	Driving park.	200	1,000	5,000	
Jennifuge County.....	H. S. Byers, Jr.	Franklin.....	R. M. Johns'n	Franklin.....	30	By individuals.	200	4,000	1,000	
Johnson Co. Joint Stock Ag. Asso.										
Knox County.....										
Kosciusko County.....	J. McDonald.	W. Pig'n, MI.	J. J. Gillett.....	Wolcottville.	20	By society.	570	1,800	500	
Lake County Agr'l Society.....	J. Q. Benjamin.	LeBoy.....	G. I. Maillet.....	Crown Point.	20	By county.	118	5,000	1,000	
Lake County Agricultural Society.....	A. Mann.	Westville.....	G. C. Dorland.	Laporte.....	16	By county.	118	4,000	2,500	
Laporte County Agr'l Society.....	Wm. Day.....	Bedford.....	Wm. Erwin.....	Bedford.....	30	Stockholders	7	None.	800	
Lawrence County Agr'l Society.....	N. C. M'Cull'gh	Anderson.....	O. M'Cull'gh	Anderson.....	30	Fee simple.	66	None.	4,000	
Madison Co. Joint Stock Agr'l So.	S. Johnson.	Irvington.....	J. Billingsley	Indianapolis.	20	Fee simple.	66	None.	2,000	
Madison Co. Agr'l and Hort'l So.									300	
Marion County.....									300	
Miami County.....										
Monroe County Agr'l Society.....	S. Dinmore.	Bloomington	O. Ferring.....	Indianapolis.	20	Leased.	200	None.	800	
Montgomery County.....	J. N. Davidson.	Whiteville.....	F. L. Snyder.....	Bloomington	10	Leased.	360	None.	15,000	
Morgan County Agr'l Society.....	S. Barnard.	Martinsville.	H. A. Smuck.	Crawf'daville	19	Fee simple.	360	1,000	1,000	
Morgan County Agr'l Society.....	S. Barnard.	Martinsville.	H. A. Smuck.	Crawf'daville	19	Fee simple.	360	1,000	3,500	
Newton County Agr'l Association.....	Geo. Clerk.	Beav'r Timb.	J. Robertson.	Morocco.....	40	Leased.	32	83	1,000	
Noble County Agr'l Society.....	O. Kimmel.	Ligonier.....	E. B. Gerber.	Morocco.....	40	Leased.	32	83	1,000	
Orange County.....				Ligonier.....	23	By society.	65	None.	1,725	
Park County.....									25	
Perry Co. Agr'l and Mech. Asso.	Jas. Hardin.	Rome.....	L. L. Whiteh'd	Rome.....	3	Joint stock.	36	None.	300	
Pike County Agr'l Society.....	G. Morgan.	Petersburg.	E. Rich'dson	Petersburg.	20	Fee simple.	36	None.	1,000	
Porter County Agr'l Society.....	J. B. Decrow.	Valparaiso.	Tim. Keene.	Valparaiso.	20	By county.	304	None.	500	
Posey County Agr'l Society.....	J. B. Elliott.	New Har'm'y	F. D. Bolton.	New Har'm'y	24	Fee simple.	270	None.	1,000	
Pulaski Co. Agr'l and Mech. Asso.	H. Kittinger.	Winamac.	A. D. Perry.....	Winamac.	20	Joint stock co.	50	None.	3,000	
Putnam County Agr'l Society.....	A. S. Bryan.	Greencastle.	J. H. Crov.	Greencastle.	20	Private prop.	35	None.	1,500	
Ripley County Agr'l Society.....	T. W. Kiser.	Winchester.	Wm. Moore.	Winchester.	23	By society.	155	719 46	1,000	
Rush County Agr'l Association.....	R. Johnson.	Elrod.....	W. Glasgow.	Osgood.....	23	Stock company	30	None.	2,000	
Shelby Co. A. H. and M. Asso.	W. M. Brooks.	Kushville.	Lon Link.....	Shelbyville.	40	Stockholders	300	1,000	3,000	
Shelby Co. Joint Stock Ag. Asso.	J. Blasing.	Shelbyville.	A. J. Gorgas.	Shelbyville.	45	By county.	178	None.	10,000	
Starke County Agr'l Society.....	O. McArthur.	Knox.....	B. T. Gerie.....	Knox.....	15	Warranty deed	125	880	1,000	
Stearns County Agr'l Society.....	A. W. Hendry.	Angola.....	B. F. Dawson.	Angola.....	32	Fee simple.	202	400	5,400	
Sullivan County Agr'l Society.....	J. W. Canary.	New Lebanon	G. W. Beeler.	Sullivan.	32	By lease.	600	200	800	
Tipton County Agr'l Society.....	H. T. Sample.	Lafayette.	J. S. Pettit.	Lafayette.	22	Co. and Society	45	900	800	
Tipton County Fair Company.....	A. B. Fitzer.	Tipton.....	Wm. Barlow.	Tipton.....	22	Co. and Society	45	900	800	
Vanderburgh County.....										
Vigo Agricultural Society.....	W. T. Boschuy	Terre Haute.	J. Gilbert.	Terre Haute.	51	By county.	110	750	5,000	
Warren Co. Agr'l Society.....	J. B. Carothers.	Wabash.....	G. W. Paul'g	Wabash.....	14	Fee simple.	108	10,000	3,000	
Warren Co. Agr'l Joint Stock Co.	Jas. Goodwin.	W. Lebanon.	J. C. Miller.....	W. Lebanon.	30	Fee simple.	160	2,400	12,000	
Warrick County.....										
Wayne County.....										
Wells County Agr'l Society.....	N. Greenfield.	Bluffton.....	J. B. Bennett.	Bluffton.....	38	Leased.	456	None.	4,000	

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA, 1880.—Continued.

Name of Society.	President.	Address.	Secretary.	Address.	Acres in Fair Ground.	How Owned.	No. of Members.	Indebtedness.	Value of Grounds.	Value of Improvements.	No. of Volumes in Library.
Whitley Co. Joint Stock Asso.	D. W. Nickey	Collin's Stat.	I. McDonald.	Columbia City	21	Stockholders	50	None.	\$5,000	\$2,500	.....
Bridgeton Union	Jas. A. Rea	Bridgeton	D. Seybold	Bridgeton	15	Leased	16	None.	.....	1,000	.....
Cambridge City Ag. and T. P. A.	A. B. Claypool	Counersville	G. Shulte, Jr.	Cambridge City	55	Stockholders	11	None.	9,000	3,000	.....
Dunkirk Union Fair Association	R. H. Broth't'n	Dunkirk	H. C. Nichols	Muncie	91	Leased	55	None.	1,000	1,500	.....
Edinburg Union Agr'l Society	G. W. King	Edinburg	C. M. A. Hees	Edinburg	56	Fee simple	275	\$4,200	6,000	5,000	.....
Fount'n. War'n & Ver'n Cos. Ag. So.	O. Shelby	Covington	H. Sewell	Covington	30	Fee simple	.....	None.	2,000	4,000	.....
Hen'y. Mad'n & Del. Cos. Ag. So.	N. B. Elliott	Middletown	J. D. Farrell	Middletown	37	Fee simple	125	140	.....	1,500	.....
Knights'town Union Agr'l Society	J. C. Campbell	Knights'town	G. Ballard	Knights'town	33	Leased	.....	None.	3,500	1,500	.....
Leogootee Agr'l and Mech. Asso.	H. J. Johnson	Leogootee	C. S. Wood	Leogootee	28	Stock br'd's	34	.....	.....	1,500	.....
New Ross Union Agr'l Association	J. Lockridge	Mace	T. A. Adkins	New Ross	28	Leased	.....	.....	.....	1,500	.....
N. Eastern Indiana Agr'l Asso.	C. A. McClellan	Waterloo	J. Patterson	Waterloo	35 1/2	Fee simple	127	2,831	3,300	10,000	53
Orleans Agricultural Association	Wm. T. Spivey	Orleans	Dr. E. J. Hon.	Orleans	31 1/2	Leased	68	.....	1,000	1,500	.....
R. Edinburg Union Agr'l Society	J. N. Full'w'r	Brownal'v	G. S. Durham	Russellville	35	Leased	16	None.	3,000	2,700	.....
S. Eastern Indiana Agr'l Society	A. D. Hoping	Anrora	Will Greer	Anrora	30	City Anrora	200	.....	8,000	2,000	.....
Switzerland Land Ohio	J. W. Coffield	Elising Sun	W. Madison	E. Enterprise	25	Leased	101	None.	.....	2,500	.....
Thorntown Union	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union City	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Xenia District Union Ag. & H. So.	.....	.....	.....	.....	30	Leased	82	300	.....	4,000	.....

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA, 1880—Continued.

EXHIBIT.

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Name of Society.	Entries.														Total.			
	Horses.	Jacks and Mules.	Cattle.	Sheep.	Hogs.	Poultry.	Other Live Stock.	Total Live Stock.	Mechanical.	Agricultural.	Horticultural.	Textile Fabrics.	Fine Arts.	Natural History.		Educational.	All Other Classes.	Special Premiums.
Indiana State Board of Agriculture.....	280	44	173	947	321	320	1,382	1,382	2,500	381	180	938	.....	36	30	125	.....	5,621
Allen County, N. Indiana Fair Assn.....	98	.....	120	100	45	180	543	543	.....	140	320	500	270	.....	.....	.....	.....	1,773
Bartholomew County Agric'l Society.....	147	19	56	63	90	104	479	479	57	79	21	23	.....	.....	.....	.....	.....	1,779
Blackford County A. H. & M. Assn.....	110	6	28	62	34	94	334	334	9	143	19	115	9	.....	.....	.....	.....	762
Boone County Stock Agric'l Society.....	184	26	48	63	76	57	422	422	62	106	44	52	38	.....	.....	.....	.....	1,068
Cass County Agricultural Society.....	189	8	66	46	46	134	489	489	86	219	111	33	494	.....	.....	.....	.....	1,760
Clark County Agricultural Society.....	94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	280
Clay Co. Agr'l Soc'y & Trot. Park Assn.....	73	.....	4	.....	3	16	96	96	39	120	27	284	7	.....	.....	.....	.....	713
Clinton County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dearborn County.....	96	3	40	26	21	26	310	310	24	58	1	124	22	1	5	231	35	711
Decatur County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Decatur County Agricultural Society.....	113	26	43	49	62	40	333	333	162	74	.....	.....	.....	.....	.....	.....	.....	1,286
Delaware Co. Agric'l & Mech. Society.....	164	12	44	53	47	149	469	469	166	344	178	672	46	.....	.....	.....	.....	1,899
Dubois County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elkhart County.....	137	.....	40	15	15	19	236	236	37	73	144	164	.....	.....	.....	.....	.....	960
Fayette Co. E. I. Agr'l. M. & T. P. A.....	106	13	46	34	47	33	279	279	93	185	50	301	41	.....	.....	.....	.....	979
Franklin Co. Joint Stock Agr'l Assn.....	122	4	28	11	25	6	191	191	.....	78	.....	138	20	.....	.....	.....	.....	576
Franklin Co. Joint Stock Ag. & Me. Soc'y	61	2	38	15	9	9	124	124	23	40	15	40	13	.....	.....	.....	.....	185
Gibson Co. Hort. & Agr'l Society.....	135	23	67	80	40	37	332	332	81	100	43	178	49	.....	.....	.....	.....	1,401
Grant Co. Agr'l & Stock Association.....	103	6	21	78	21	60	288	288	26	73	20	44	.....	.....	.....	.....	.....	889
Greene County Agricultural Society.....	58	8	35	17	13	29	160	160	10	23	26	16	26	.....	.....	.....	.....	411
Hamilton Co. Agricultural Society.....	20	.....	.....	.....	.....	.....	35	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
Hancock County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrison Co. Agricultural Society.....	338	7	43	68	91	70	607	607	.....	234	81	82	63	.....	.....	.....	.....	1,508
Hendricks County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Howard Co. Joint Stock Agr'l Society.....	97	5	29	43	37	30	272	272	79	55	25	198	38	.....	.....	.....	.....	666
Huntington County Agr'l Society.....	168	27	76	72	58	34	443	443	122	61	73	383	61	.....	.....	.....	.....	1,363

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA, 1880—Continued.

Name of Society.	Entries.													Total.				
	Horses.	Jacks and Mules.	Cattle.	Sheep	Hogs.	Poultry.	Other Live Stock.	Total Live Stock.	Mechanical.	Agricultural.	Horticultural.	Textile Fabrics.	Fine Arts.		Natural History.	Educational.	All Other Classes.	Special Premiums.
Jackson County Agricultural Society	79	6	39	29	10	12	.....	165	18	7	6	8	.....	.....	.....	172	.....	870
Jasper County Agricultural Society	67	4	44	14	32	132	20	303	30	24	6	51	1	.....	24	61	16	515
Jay Co. A. H. & Joint Stock Co.	66	.....	30	77	44	48	.....	965	103	281	41	205	60	.....	.....	20	.....	965
Jefferson County Ag. Soc. ety	30	10	60	20	20	30	10	170	60	60	80	100	.....	8	.....	.....	.....	410
Jennings County	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,190
Johnson Co. Joint Stock Ag. Assn.	30	10	40	50	68	98	.....	841	17	130	.....	.....	.....	.....	.....	692	.....	1,617
Knox County	.....	.....	.....	.....	.....	.....	.....	423	140	186	66	810	.....	.....	.....	.....	.....	.....
Kosciusko County	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lagrange County Ag. Society	139	3	24	30	17	29	.....	242	7	17	93	114	.....	.....	46	282	.....	773
Lake County Ag. Society	163	.....	91	18	61	6	13	362	.....	82	.....	.....	.....	.....	.....	91	11	507
Laporte County Ag. Society	104	.....	37	21	16	30	.....	306	44	83	.....	26	.....	.....	.....	127	.....	488
Lawrence County Ag. Society	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison Co. Joint Stock Ag. Society	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison Co. Ag. & Hort. Society	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Martin County	142	13	27	83	59	194	.....	517	87	81	90	381	56	.....	.....	.....	.....	1,158
Miami County	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monroe County Ag. Society	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montgomery County Union	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morgan County Ag. Society	353	14	196	151	183	171	.....	997	132	170	60	10	112	.....	29	813	15	1,838
Newton County Ag. Association	123	19	21	34	42	20	.....	259	32	49	16	207	16	.....	.....	118	84	830
Noble County Ag. Society	83	5	9	7	15	15	.....	133	14	84	11	24	9	.....	.....	22	.....	297
Orange County	102	4	40	19	10	9	4	188	46	87	18	145	48	.....	4	92	.....	816
Perry County	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perry County Ag. & Mech. Assn.	64	4	.....	.....	10	.....	.....	78	.....	.....	.....	.....	.....	.....	.....	500	.....	678
Pike County Ag. Society	133	20	43	30	28	52	.....	385	.....	34	196	131	40	.....	.....	35	36	471
Porter County Ag. Society	152	.....	14	26	36	19	.....	946	29	83	.....	.....	.....	.....	.....	47	5	893
Posey County Ag. Society	198	9	48	11	38	38	.....	354	66	201	66	89	41	.....	.....	940	.....	1,995
Pulaski County Ag. & Mech. Assn.	74	10	10	20	16	17	.....	146	6	68	13	46	3	.....	.....	70	.....	479
Putnam County Ag. Society	113	6	88	41	30	1	.....	223	20	34	11	176	16	.....	.....	.....	.....	.....

Randolph County A. H. & M. Asso.....	110	28	30	58	63	37	.....	394	68	408	71	158	27	.....	186	.....	1,227
Ripley County Ag. Society.....	141	16	40	38	20	13	.....	294	86	58	35	138	19	.....	259	.....	773
Rush County Ag. Society.....	188	14	51	53	75	61	.....	437	86	128	76	398	10	.....	101	.....	1,288
Shelby Co. Joint Stock Ag. Asso.....	194	25	45	53	80	96	.....	494	90	125	20	58	601	.....	410	.....	1,798
Starke County Ag. Society.....	90	3	9	5	5	5	.....	42	24	5	5	5	.....	8	.....	84	
Steuben County Ag. Society.....	80	3	48	56	35	47	.....	259	80	542	300	192	31	25	86	.....	1,643
Sullivan County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tippecanoe County Ag. Asso.....	119	9	41	26	86	34	39	354	2	9	29	5	111	.....	78	.....	583
Tipton County Fair Company.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vanderburgh county.....	162	5	49	20	47	11	.....	294	99	208	433	16	25	.....	192	.....	2,166
Vigo County Ag. Society.....	272	17	68	59	48	140	.....	604	81	854	.....	685	.....	.....	380	.....	2,084
Wabash County Ag. Society.....	103	6	47	43	44	34	23	304	53	158	66	341	33	.....	508	38	1,601
Warren County Joint Stock Co.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warrick County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne County.....	134	3	43	53	22	20	.....	313	285	.....	.....	352	31	.....	67	.....	1,043
Wells County Ag. Society.....	68	19	9	16	33	145	.....	145	37	36	20	95	24	.....	11	.....	1,388
Whitley Co. Joint Stock Asso.....	73	8	18	42	43	50	.....	238	29	169	87	451	800	.....	246	.....	2,080
Bridgton Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cambridge City Ag. & T. P. Asso.....	49	6	25	47	38	37	.....	202	15	130	13	13	2	.....	50	.....	432
Dunkirk Union Ag. Society.....	180	82	71	41	58	73	.....	429	171	137	31	69	81	.....	837	.....	1,778
Edinburg Union Ag. Society.....	63	9	31	30	30	19	.....	172	44	60	522	321	35	.....	83	3	1,245
Henry, Madison & Del Co.'s Ag. S.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knightstown Union Ag. Society.....	130	13	23	76	65	147	.....	513	164	55	61	440	20	.....	188	.....	1,451
Leicester Ag. & Mech. Asso.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Ross Union Ag. Asso.....	386	14	78	30	74	5	.....	537	16	62	34	384	44	.....	318	.....	1,450
Northeastern Indiana Ag. Asso.....	112	2	74	45	67	69	2	870	182	570	870	396	25	50	81	171	2,165
Orleans Agricultural Asso.....	188	20	56	94	20	8	.....	316	90	40	25	198	.....	15	121	5	1,740
Russellville Union Ag. Society.....	138	12	64	39	80	176	.....	559	48	102	280	47	27	.....	65	.....	1,078
Southeastern Indiana Ag. Society.....	140	35	50	.....	400	.....	.....	925	122	136	98	9	.....	.....	371	.....	1,325
Switzerland and Ohio.....	163	31	43	34	23	40	.....	334	132	135	.....	.....	.....	.....	.....	.....	1,080
Thornstown Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union City.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Xenia Dist. Union Ag. & Hort. Society.....	91	20	69	23	40	35	.....	278	25	200	20	.....	186	.....	110	.....	719

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA, 1880—Continued.

Name of Society.	Premiums Paid.															Total.		
	Horses.	Jacks and Mules.	Cattle.	Sheep.	Hogs.	Poultry.	Other Live Stock.	Total Live Stock.	Mechanical.	Agricultural.	Horticultural.	Textile Fabrics.	Fine Arts.	Natural History.	Educational.		All Other Classes.	Special Premiums.
Indiana State Board of Agriculture.....	\$3,922	\$204	\$980	\$460	\$616	\$195	.....	\$5,377	.....	\$272	\$408	\$411	..	\$55	.....	.....	.....	\$6,553
Allen Co. N. Indiana Fair Association.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bartholomew Co. Agricultural Society.....	123	56	284	232	181	69	.....	1,245	\$187	76	39	116	\$30	.....	.....	\$787	.....	2,124
Blackford Co. A., B. and M. Assoc'n.....	583	16	123	121	101	47	.....	991	.....	53	32	33	.....	.....	.....	32	.....	1,220
Boone Co. Stock Agricultural Society.....	.....	64	210	65	170	42	.....	1,536	130	96	32	40	42	.....	.....	180	.....	2,046
Cass Co. Agricultural Association.....	1,313	15	279	67	75	90	.....	1,839	95	113	91	16	\$29	.....	.....	102	.....	2,485
Clark Co. Agricultural Association.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	360
Clay Co. A. S. and Clay Trot. Park A.....	734	.....	25	.....	18	7	.....	784	37	88	18	106	1	.....	.....	137	.....	1,163
Clinton County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davies Co. Agricultural Association.....	1,061	11	192	60	79	25	.....	1,438	66	32	1	57	\$2	3	\$4	75	\$15	1,702
Dearborn County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Decatur Co. Agricultural Society.....	938	70	341	64	192	20	.....	1,625	138	41	.....	.....	.....	.....	.....	198	.....	2,002
Delaware Co. Ag. and Mech. Society.....	922	46	156	108	138	89	.....	1,459	115	123	92	139	36	.....	.....	25	.....	1,979
Dubois County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elkhart County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fayette Co. E. I. A., M. and T. P. A.....	654	20	227	78	127	41	.....	1,172	115	109	67	182	50	.....	.....	.....	.....	1,695
Franklin Co. Joint Stock Agr. Assoc'n.....	419	18	75	24	62	8	.....	601	43	43	.....	106	6	3	74	54	.....	887
Franklin Co. J. St. Ag. and Mech. Soc'y.....	175	5	74	20	14	8	.....	316	20	21	10	19	.....	.....	.....	23	7	480
Gibson Co. Horticult. and Ag. Soc'y.....	333	58	189	59	97	25	.....	781	84	87	44	.....	33	.....	.....	429	.....	1,488
Grant Co. Agricul. and Stock Assoc'n.....	244	14	46	90	24	27	.....	445	14	40	18	.....	36	.....	3	231	.....	1,777
Greene Co. Agricultural Society.....	95	15	74	25	27	11	.....	247	16	10	10	6	15	.....	.....	68	.....	871
Hamilton Co. Agricultural Society.....	100	.....	.....	.....	10	.....	.....	110	.....	.....	.....	.....	.....	.....	.....	.....	.....	110
Hancock County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrison Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,329
Hendricks County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Howard Co. Joint Stock Agr. Assoc'n.....	287	22	101	107	139	26	\$18	700	50	14	29	71	31	.....	.....	294	.....	1,188
Huntington Co. Agricultural Society.....	314	31	922	131	174	19	.....	191	114	22	39	75	20	.....	.....	129	311	1,601
Jackson Co. Agricultural Society.....	406	22	75	46	18	6	.....	573	27	5	3	3	.....	.....	.....	90	.....	702

	43	3	29	10	23	33	19	309	28	17	3	23	1	8	34	9	330
Jasper Co. Agricultural Society.....	218	.....	127	86	149	48	.....	628	.....	280	45	205	66	.....	175	.....	1,439
Jay Co. A., H. and I. Joint Stock Co.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jennings County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Johnson Co. Joint Stock Ag. Assoc'n.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knox County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kosciusko County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lagrange Co. Agricultural Society.....	330	.....	195	53	190	6	.....	704	24	30	.....	15	.....	.....	.....	28	1,031
Lake Co. Agricultural Society.....	260	.....	147	40	30	16	.....	493	85	70	.....	.....	.....	.....	.....	.....	1,866
Laporte Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	708
Lawrence Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,316
Madison Co. Joint Stock Ag. Society.....	1,155	46	211	194	167	104	.....	1,866	200	16	74	130	59	.....	.....	.....	40
Madison Co. Ag. and Hort. Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marion County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Martin County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miami County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monroe Co. Agricultural Society.....	3,331	45	1,148	172	246	125	.....	5,058	146	234	62	21	139	.....	.....	.....	5,403
Montgomery Co. Union.....	966	55	126	121	154	46	.....	1,468	138	56	28	116	26	.....	.....	.....	1,912
Morgan Co. Agricultural Association.....	614	16	47	15	38	11	.....	743	26	26	7	4	4	.....	.....	.....	804
Newton Co. Agricultural Association.....	489	8	89	33	16	6	4	644	29	23	14	80	22	.....	.....	.....	831
Noble Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orange County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parke County.....	210	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	830
Perry Co. Ag. and Mech. Assoc'n.....	514	56	215	87	113	38	.....	1,210	.....	61	97	63	32	.....	.....	.....	1,539
Pike Co. Agricultural Society.....	187	.....	35	41	36	8	.....	307	35	20	33	25	21	.....	.....	.....	1,635
Porter Co. Agricultural Society.....	921	29	157	26	142	39	.....	1,314	69	60	33	25	21	.....	.....	.....	1,714
Posey Co. Agricultural Society.....	120	9	20	28	27	4	.....	818	5	13	5	10	2	.....	.....	.....	874
Pulaski Co. Ag. and Mech. Society.....	107	12	66	27	35	.....	.....	237	8	35	7	7	1	.....	.....	.....	235
Putnam Co. Agricultural Society.....	281	59	109	78	131	24	.....	682	74	154	61	58	30	.....	.....	.....	1,101
Randolph Co. A., H. and M. Assoc'n.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ripley Co. Agricultural Association.....	1,413	60	307	194	180	30	.....	3,184	176	66	84	123	32	.....	.....	.....	2,688
Rush Co. Agricultural Society.....	2,473	77	316	304	234	97	.....	3,451	154	111	46	59	311	.....	.....	.....	4,367
Shelby Co. Joint Stock Ag. Assoc'n.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Starke Co. Agricultural Society.....	673	6	101	70	24	19	.....	893	61	96	50	50	25	.....	.....	.....	1,321
Steuben Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tippecanoe Co. Agricultural Assoc'n.....	630	30	1,435	311	375	103	.....	4,944	74	102	96	11	.....	.....	.....	.....	6,803
Tipton Co. Ag. Company.....	271	23	138	58	139	10	.....	1,049	.....	17	10	.....	.....	.....	.....	.....	1,106
Vanderburgh County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vigo Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wabash Co. Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren Co. Agricul. Joint Stock Co.....	700	35	420	80	100	68	.....	1,418	116	60	36	150	70	.....	.....	.....	2,100
Warrick County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wells Co. Agricultural Society.....	271	10	235	108	63	21	.....	708	.....	185	.....	136	35	.....	.....	.....	1,293

EXHIBIT OF THE AGRICULTURAL SOCIETIES OF INDIANA, 1880—Continued.

Name of Society.	Premiums Paid.															Total.		
	Horses.	Jacks and Mules.	Cattle.	Sheep.	Hogs.	Poultry.	Other Live Stock.	Total Live Stock.	Mechanical.	Agricultural.	Horticultural.	Textile Fabrics.	Fine Arts.	Natural History.	Educational.		All Other Classes.	Special Premiums.
Whitley Co. Joint Stock Association.....	\$461	\$38	\$127	\$81	\$159	\$38	.....	\$864	\$65	\$46	\$50	\$190	143	..	..	..	.....	\$318
Bridgeton Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,398
Cambridge City Ag. and T. P. Assoc'n.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkirk Union Fair Association.....	300	15	168	70	124	40	.....	717	.....	.....	50	4	5	..	\$1	\$10	.....	787
Edinburg Union Agricultural Society.....	1,029	96	333	154	178	63	.....	1,853	378	71	76	37	40	..	.....	296	.....	2,622
Franklin, Warren & Vermil'n Co. A. S.....	629	25	148	61	80	14	.....	1,838	79	36	110	154	28	..	.....	94	58	1,378
Henry, Madison & De la Co's Ag. Soc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knightstown Union Agricul. Society.....	725	52	243	171	283	57	.....	1,481	146	29	35	221	26	..	.....	79	.....	892
Leedswood Ag. and Mech. Assoc'n.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Ross Union Agricultural Assoc'n.....	1,108	36	291	59	100	4	.....	1,688	40	78	36	180	53	..	.....	25	.....	2,008
Northeastern Indiana Ag. Assoc'n.....	883	7	264	88	138	29	.....	\$2	168	103	68	133	27	56	.....	650	48	2,113
Orleans Agricultural Society.....	126	7	17	13	11	8	.....	161	5	14	10	35	.....	.....	4	15	5	2,349
Russellville Union Agricul. Society.....	725	40	354	75	104	126	.....	1,453	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,453
Southeastern Indiana Ag. Society.....	600	70	300	70	200	200	.....	1,170	.....	.....	.....	.....	.....	.....	.....	400	.....	1,670
Switzerland and Ohio.....	682	68	190	61	89	31	.....	1,065	178	79	84	8	.....	.....	23	286	.....	1,700
Thorn town Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union City.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Xenia District Ag. and Hort. Society.....	350	55	297	53	80	47	798	140	118	51	68	188	1,395

EXHIBIT OF INDIANA AGRICULTURAL SOCIETIES, 1880—Continued.

EXHIBIT.

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Name of Society.	Receipts.					Disbursements.							
	Admission Fees.	From License Fund.	Entry Fees.	Privileges Sold.	All Other Sources.	Total.	Rent and Old Debts.	Improvements.	Salaries.	Premiums.	Expenses of Fair.	Other Accounts.	Total.
Indiana State Board of Agriculture.....	\$13,800	.....	\$935	\$4,320	\$1,723	\$18,800	\$790	\$3,072	.....	\$9,553	\$2,823	\$9,385	\$22,623
Allen Co. Northern Indiana Fair Asso.....	.....	\$100	.....	.....	.....	100	.....	.....	.....	.....	474	.....	3,138
Bartholomew Co. Agricultural Society.....	1,250	40	454	926	67	3,118	.....	250	\$80	1,220	103	.....	2,103
Blackford County A. H. & M. Asso.....	894	.....	323	.....	234	1,461	668	112	.....	1,220	.....	.....	2,484
Boone Co. Stock Agricultural Society.....	1,706	15	219	483	67	2,481	.....	320	.....	2,046	118	.....	3,943
Cass County Agricultural Association.....	3,138	.....	391	680	506	4,724	680	180	.....	2,485	584	8	.....
Clark County Agricultural Association.....	384	15	129	43	13	584	.....	50	.....	2,900	131	43	.....
Clay Co. Agricultural Soc. & Clay T. P. Asso.	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,163	.....	.....	1,163
Clinton County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davess County Agricultural Association.....	968	45	515	523	47	2,088	.....	285	.....	1,702	101	150	2,288
Dearborn County.....	.....	.....	433	665	262	3,192	260	300	234	2,002	237	.....	2,072
DeCATUR County Agricultural Society.....	1,712	40	260	63	391	2,419	200	200	75	1,979	161	.....	2,418
Delaware Co. Agricultural & Mech. Society.	1,675	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dubois County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elkhart County.....	2,070	15	418	334	282	3,128	.....	682	315	1,695	240	114	3,085
Fayette Co. E. Ind. A. M. & T. P. Asso.....	693	45	107	247	188	1,280	212	55	45	887	242	141	1,441
Franklin Co. Joint Stock Agricultural Asso.	534	25	24	82	22	657	.....	70	.....	402	190	.....	662
Fulton Co. Joint Stock Agr'l & Mech. Soc.	2,346	20	84	499	574	3,592	.....	814	125	1,437	142	439	2,957
Gibson Co. Hort. & Agr'l Society.....	890	50	157	205	66	1,598	.....	185	75	817	152	30	1,250
Grant Co. Agr'l & Stock Asso.....	607	170	72	156	70	1,075	.....	420	50	371	177	20	1,068
Greene County Agricultural Society.....	125	.....	.....	40	35	200	.....	.....	.....	.....	.....	.....	200
Hamilton County Agricultural Society.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hancock County.....	1,901	.....	.....	254	661	2,816	.....	221	.....	1,329	549	.....	2,098
Harrison County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hendricks County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry County.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Howard Co. Joint Stock Agr'l Asso.....	1,700	94	259	188	114	2,355	.....	115	245	1,188	372	117	2,037
Huntington County Agricultural Society.....	2,186	.....	.....	.....	636	2,822	.....	129	30	1,601	396	52	2,208

EXHIBIT OF INDIANA AGRICULTURAL SOCIETIES, 1880—Continued.

Name of Society.	Receipts.					Disbursements.							
	Admission Fees.	From License Fund.	Entry Fees.	Privileges Sold.	All Other Sources.	Total.	Rent and Old Debts.	Improvements.	Salaries.	Premiums.	Expenses of Fair.	Other Accounts.	Total.
Jackson County Agricultural Society.....	\$645		\$30	\$130	\$315	\$1,120	\$51			\$702	\$188		\$941
Jasper County Agricultural Society.....	835	\$30	350	192	129	1,616	18			963		\$531	1,892
Jay Co. A. H. & I. Joint Stock Co.....	863			302	237	1,392		\$180	384	1,439	49	73	2,125
Jefferson County Agricultural Society.....	561	38	123	40		762			100		543		613
Jennings County.....													
Johnson Co. Joint Stock Agr'l Assn.....						2,470							2,470
Knox County.....													
Kosciusko County.....													
Lagrange Co. Agricultural Society.....	849	10		52	41	952							1,015
Lake County Agricultural Society.....	668		288	99	881	1,936	331	58	75	1,021	269	53	1,778
Laporte County Agricultural Society.....	748	197	178	92	285	1,600	290	70	50	866	224		1,600
Lawrence County Agricultural Society.....	710	30	167	107	17	1,031							1,033
Madison Co. Joint Stock Agr'l Society.....	2,657	50	323	376	386	3,692		1,882	600	2,316	100	60	4,848
Marion Co. Agr'l & Hort. Society.....		275				275				40	30	10	80
Martin County.....													
Miami County.....													
Monroe County Agricultural Society.....													
Montgomery County Union.....	6,562	36	594	768	285	8,269				5,803	358		6,561
Morgan County Agricultural Association.....	665	70	520	331	501	2,087	178	800	140	1,089	900		2,417
Newton County Agricultural Association.....	477	154	245	178	178	1,054	25	200		810	90	11	1,136
Noble County Agricultural Society.....	871	20	130	73	67	1,160	160	40	73	831	66		1,160
Orange County.....													
Parke County.....													
Perry Co. Agr'l & Mech. Association.....		20	139	70	781	1,000				380	420		800
Pike County Agricultural Society.....	1,863	30	539	523	135	3,079	387	181	280	1,939	333	61	3,181
Porter County Agricultural Society.....		50	140	30	85	285	43			598	64		890
Posey County Agricultural Society.....	1,917		413	1,017	110	3,457		600	189	1,995	500	269	3,573
Pulaski Co. Agr'l & Mech. Society.....	607	10	87	80		684		34	50	337	150		871

INDIANA RESOURCES, 1880.

The State contains an area of 22,564,870 acres, and is located in the great central basin of North America, nearly equidistant from the Mississippi river on the west, the Allegheny mountains on the east, the Gulf of Mexico on the south, and the water-shed between the great lakes and the Hudson bay on the north. The greater portion of its surface is rather level or undulating, only the southern portion, bordering on the Ohio river, perhaps one-third in extent, being decidedly hilly, and in places almost mountainous. The principal rivers that traverse the State are the Wabash and White rivers, but to these might be added a large number of less importance and smaller drainage, as the Whitewater, the Maumee, the St. Joseph, the Kankakee, the Tippecanoe, the Mississinewa, the Elkhart, the Calumet, and scores of others which flow through different portions of the State, watering its magnificent soil and diversifying its varied scenery.

Indiana stands at the head of the States in railroads and telegraphs, having, in 1880, 4,963 miles of railroad in successful operation, aggregating one mile to every four hundred and twenty of her entire population, being a much larger proportion than in any other section of the civilized world. In addition to this, there are about 1,000 miles of railroad surveyed and in process of construction. The geographical position of the State is such that all through lines of railroad from the eastern cities to the west, southwest and northwest, must almost of necessity cross her borders, as, in fact, they do. A glance at the map will show that the great lakes on the north, and the semi-mountainous country bordering along the Ohio river on the south, will forever compel railway lines seeking a western outlet from New York, Philadelphia and Boston, to cross the State of Indiana. The consequence is, that with what through lines that cross the State, north and south lines that intersect them, and local

lines that tap and connect both, Indiana has the most complete railroad system of any State in the Union. Her position relative to the southwestern States is equally fortunate, since the vast commerce that is destined to grow up between them and the middle and eastern States, must, inevitably seek this route.

There are improved and under cultivation 10,104,279 acres of land. The State contains 7,189,334 or 39.6 per cent. of wood land^c having 8 per cent. more than Ohio on the east, and 20 per cent. more than Illinois on the west. Of prairie land there are 3,760,812 acres, or one-sixth the entire State, lying principally in the north and northwest, (included in this estimate, are the oak-openings of the northern counties). Of other unimproved land, water courses, etc., there are 1,510,445 acres.

The average value of farm land is \$20.44 per acre. The State supports an average of sixty souls to each section of land (of 640 acres), with an estimated population of 2,115,420 inhabitants, which, by comparison with foreign countries, is only about one-seventh (1-7) her capacity, being capable of supporting an additional number of 14,884,480.

The total number of school-houses in this State is 9,647; pupils in attendance, 511,233; the value of school property is \$11,817,730, with an annual expenditure of \$2,939,872 for their maintenance.

The State ranks, comparatively, second to no other State in the Union in her system of schools and educational exhibit.

For statistics of products, see tables embodied in this report which give number of bushels of each of the grains grown, and number of live stock.

The amount of rain fall for 1880 was 44.52 inches. The average for ten years, (from 1871 to 1880) is 44.71 inches, showing an abundance of rain necessary for the production of all the cereal crops, and almost entirely preventing the possibility of *drouth*, the occurrence of which is looked for with dread by so many countries.

The location of the State, as noted above, traversed as it is by numerous small rivers and creeks flowing into the Wabash on the west, the Ohio on the south, and the great lakes on the north, afford a *great* amount of natural drainage.

Indiana is strictly an agricultural State. Nature has given her the soil and climate for producing the cereals in as great abundance, and at as little cost as in any other country of like size on the face of the globe; consequently a very large proportion of the popu-

lation of the State, as of all the Western States, is engaged in agriculture; but there are also numerous large cities and thrifty towns in the State, some of which have already reached positions of great commercial and manufacturing importance.

She has developed wonderfully in the number and amount of her manufactures, and is now producing nearly every class of labor-saving machinery, furniture, and implements, creating wealth and at the same time advancing the civilization of her people. It is shown by statistics that Indiana has in use more improved agricultural machinery, in proportion to the population, than any other State.

In mineral resources Indiana stands in the very front rank of States. Of coal and iron, the two great sources of wealth and mainsprings of civilization, she has practically inexhaustible deposits. A vast bed of block or iron smelting coal underlies all the western and southwestern portions of the State, including the counties of Fountain, Parke, Vermillion, Owen, Clay, Sullivan, Knox, Daviess, Martin, Dubois, Pike, Gibson, Warrick, Spencer, Vanderburgh and Posey. This deposit is of incalculable value to the State. The coal is unequaled for smelting iron, and the day can not be far distant when it will induce the building of blast furnaces all along and through the coal basin. Several are now in successful operation, and the business of coal mining at different points is assuming mammoth proportions. In Perry county, on the Ohio river, is a magnificent deposit of cannel coal, which is already extensively mined. Iron ore is also found in large quantities throughout much of the coal region, and the day will undoubtedly come when these two prime elements of manufactures will attract enormous capital and population within her borders. Building stone of all kinds, fire and porcelain clay, ochre and other minerals, are found in abundance, while the supply of all kinds of timber is equal to the demand.

The report of the Chief of the Bureau of Statistics and Geology for 1880, gives the facts and figures to confirm the statements in the foregoing.

The State, with its wonderful resources and rapidly increasing population, lying as it does midway between the Eastern and Western States, combines the advantages of both sections, and draws wealth and substance from each.

COMPARATIVE STATISTICS.

PRODUCTS of the State of Indiana for the years designated, each ending April 1, as collected by the Township Assessors and compiled from the State Auditor's Reports and the Bureau of Statistics.*

Products.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Horses, number.....	518,108	511,136	518,534	531,361	535,316	558,656	503,045	.....
Mules, number.....	62,045	61,397	60,439	61,189	57,231	54,470	57,815	.....
Cattle, number.....	1,275,265	1,138,179	1,066,943	1,058,821	1,067,306	1,017,388	1,065,143	.....
Sheep, number.....	1,301,464	1,046,573	1,157,277	903,177	916,771	906,849	1,638,860	.....
Hogs, number.....	2,883,654	2,408,657	2,182,069	2,455,534	2,575,186	2,624,541	2,003,943	.....
Wheat, acres.....	2,042,881	2,010,849	1,889,605	1,492,896	1,708,870	2,220,626	2,422,480	.....
Corn, acres.....	2,668,722	2,913,992	3,098,198	4,300,737	3,246,931	3,418,087	3,517,808	.....
Oats, acres.....	642,978	583,425	592,516	556,880	626,699	674,231	883,492	.....
Meadow, acres.....	1,375,228	1,053,048	1,089,654	1,184,010	1,266,781	1,116,438	1,011,835	.....
Wheat, bushels.....	20,825,453	23,552,009	17,274,711	15,433,129	21,022,431	29,473,883	41,236,650	.....
Corn, bushels.....	73,970,658	82,780,997	70,390,463	85,230,308	93,812,093	89,678,502	89,517,635	.....
Rye, bushels.....	197,625	230,762	413,795	312,081	546,791	374,892	172,363	.....
Oats, bushels.....	7,541,089	7,891,390	7,334,797	6,478,901	10,648,120	21,566,485	11,801,049	.....
Barley, bushels.....	2,647,119	2,808,880	4,668,120	2,678,069	1,544,414	3,185,480	4,192,841	.....
Potatoes, bushels.....	199,140	261,233	149,935	142,760	134,945	205,663	343,751	.....
Flaxseed, bushels.....	182,086	250,932	877,241	304,397	876,906	407,828	1,136,179	.....
Hay, tons.....	980,564	739,029	798,125	983,797	1,057,692	913,872	8,970,932	.....
Wool, pounds.....	2,568,368	2,087,045	2,717,738	1,718,468	2,306,895	1,860,178	3,893,715	.....
Tobacco, pounds.....	9,722,286	6,765,499	6,769,590	12,378,731	12,773,636	7,408,104	6,790,413	.....

*The figures for the year 1878, 1879 and 1880 are from the Report of the Bureau of Statistics. The figures of 1880 are estimated by the Township Trustees.

INTER-STATE AGRICULTURAL CONVENTION.

The Inter-State Agricultural Convention met as per call of the Secretaries of the Boards of Agriculture of the States of Illinois, Kansas, Iowa, Wisconsin, Indiana and Ohio, at the rooms of the Illinois department of agriculture, Springfield, November 30, 1880.

The meeting was called to order by Secretary S. D. Fisher, of Illinois, who stated the objects of the meeting to be for the purpose of adopting a uniform system of collecting and publishing agricultural statistics, as well as to discuss the best methods of advancing the general interests of agriculture through State Boards of Agriculture.

On motion of L. B. Wing, of Ohio, Dr. R. T. Brown was made chairman by acclamation.

On motion of A. Heron, of Indiana, J. K. Hudson, of Kansas, was made secretary.

On motion of W. I. Chamberlain, of Ohio, Charles F. Mills, of Illinois, was made assistant secretary, and S. D. Fisher, treasurer.

The following gentlemen were reported as being in attendance at the convention :

L. B. Wing, President Ohio State Board of Agriculture.			
D. L. Pope, Treasurer	"	"	"
W. I. Chamberlain, Sec'y	"	"	"
Leo. Weltz, member	"	"	"
R. Baker, member	"	"	"
O. P. Chaney, member	"	"	"
C. Smith, member	"	"	"
S. J. Wooley, member	"	"	"
Clinton Babbitt, member Wisconsin State Board of Agriculture.			
Joseph Shortledge, President Penn. State Agricultural College.			
H. C. St. Clair, Vice-Pres. Kansas State Board of Agriculture.			
J. K. Hudson, Secretary	"	"	"

Henry T. Sample, Vice-Pres. Indiana State Board of Agriculture.			
Alex. Heron, Secretary	"	"	"
Dr. R. T. Brown, member	"	"	"
E. F. Brockway, Vice-Pres. Iowa State Agricultural Society.			
James R. Scott, President Illinois State Board of Agriculture.			
D. B. Gillham, Ex-President	"	"	"
W. M. Smith, member	"	"	"
David E. Beaty, member	"	"	"
S. D. Fisher, Secretary	"	"	"
Charles F. Mills, Ass't Sec'y	"	"	"

Motion of Mr Chamberlain, carried, that a committee of three be appointed to prepare an order of business.

Motion of Mr. Wing, carried, that the committee on order of business consist of Messrs. Chamberlain, Heron and Fisher.

The secretary read communications from the following gentlemen, expressing regret at not being able to attend the meeting and giving assurance of deep interest in the objects of the convention.

Dr. J. A. Warder, President of the American Forestry Association; George E. Bryant, Secretary Wisconsin State Board of Agriculture; J. P. Roberts, Professor of Agriculture, Cornell University; Chas. W. Murtfeldt, St. Louis; J. R. Shaffer, Secretary Iowa Agricultural Society; H. H. Young, Secretary Board of Immigration of Minnesota; Prof. George E. Morrow, Dean, Illinois Agricultural University; B. F. Johnson, Champaign.

Motion of Mr. Wing, carried, that the correspondence be published with the proceedings.

Chairman committee on Order of Business reported the following exercises for the evening session :

1. Outline of the work of the Convention, by W. I. Chamberlain, of Ohio.
2. Open letter to the Convention, by Charles W. Murtfeldt, of Missouri.

On motion of Mr. Hudson, the report of the committee was concurred in, and the reading of the papers made the special order.

[The session continued two days and the following named additional papers read and discussed, but the limited space here forbids a full report.—SEC'Y.]

Speed ring and the management of State Fairs, by John R. Shaffer, Secretary Iowa Agricultural Society.

The growth of the crop report idea in Illinois, by S. D. Fisher, Secretary Illinois State Board of Agriculture.

The relation of the State Boards of Agriculture to the National Department of Agriculture, by Dr. R. T. Brown, of Indiana State Board of Agriculture.

Crop reports, their scope and value, by W. I. Chamberlain, Secretary Ohio State Board of Agriculture.

Work of the Indiana State Board of Agriculture, by Alex. Heron, Secretary.

Protection for the cattle interest, by L. B. Wing, President Ohio Board of Agriculture.

Our interest in the foreign grain demand, by H. H. Young, Secretary Minnesota State Board of Immigration.

PRELIMINARY PAPER.

BY W. I. CHAMBERLAIN.

*Mr. President and Gentleman
of the Inter-State Agricultural Convention :*

I am asked to state briefly the objects of this convention. As I understand, we are not here for an intellectual entertainment, but for work; not here for a feast of reason and a flow of soul, but to mature plans of united effort for the benefit of the agricultural interests of the various States we represent. In union there is strength, and we have need of union on various points. Our State Boards of Agriculture grew up in different conditions, and to supply different wants, and are, therefore, diverse in many respects. Our States have grown older and more like one another. Can our Boards be made more harmonious in action, and do a larger and more beneficent work by such unions? Conventions are common now of those engaged in like callings. Lawyers, doctors, divines, bankers, railway men, teachers, county auditors, prosecuting attorneys, merchants, farmers, breeders, etc., all have their conventions. But so far as I am informed, this is the first Inter-State Convention of Boards of Agriculture. I hope it may not be the last.

Now the work done by the different State Boards and the

methods pursued are diverse. But it would take more self-conceit, I am sure, than any of us possess, to suppose that any one Board has the best ends and methods in all respects. Hence, we are, all of us, sure to be the gainers by a friendly comparison of views. I have spoken of the different work and methods in different States. For example, in Michigan, the Board of Agriculture has charge of the Agricultural College, and the management (with the assistance of an able faculty) of a series of farmers' institutes throughout the State, whose object is to diffuse a better scientific knowledge of agriculture and horticulture, and better methods of work. The Michigan agricultural report is largely made up of the doings of these institutes and the publication of scientific researches, experiments and analysis made at the college. The agricultural statistics are, I believe, published by a special statistician. The State Fair is run by an independent agricultural society, and a large and flourishing horticultural society exists, and publishes a large horticultural report. Thus, four organizations, do the work properly belonging to a department of agriculture. Do they do it better or cheaper, or is work duplicated and expense increased? These questions we may hope to have answered here, under the subject assigned to Judge Bryant. So, again, in Minnesota, there is a Board or Bureau of Immigration, and another of Agriculture and another of Statistics. What should be the relation of these? Is it best to have them united as in Kansas? Secretary Hudson of that State, we hope will help us answer that.

In Iowa, the Agricultural Society runs the State Fair and publishes the annual agricultural report with no aid from the State, except printing the annual volume, not even secretary's salary and office rent, while in Kansas and in Illinois and Tennessee the States give office rent free in the State-house, and give about \$10,000 each in appropriations for the advancement of agriculture. Which is the wiser course? We hope for light on this point and aid for those States where the Legislatures are less liberal.

Ought a State Board to be simply a body of showmen, required to give their time for nothing, and if they make anything devote the surplus to the advancement of agriculture in other directions, and if they lose anything put their hands in their pockets or their names to bank paper and foot the bills as has been done more than once in Iowa and Ohio?

Again puzzling questions of policy and even morals come up in the management of our annual exhibitions. Does the speed ring belong to them? Is the breeding of improved roadsters a legitimate branch of agriculture and the speed ring a proper means of encouraging it? Or is the race always and only evil? Shall beer be

allowed on the ground, or side shows and amusement? Then, too, there are questions of detail where uniformity would be an advantage. Shall we charge the exhibitors gate fees, or half fees, or none? Shall we charge an entry fee on articles or stock exhibited? Shall we offer any premiums at all on agricultural machinery? If not, how shall we foster and promote the industries and manufactures that advance agriculture? Shall the red card and ribbon, or the blue denote first premium? On these and other points we hope for light from the papers by Brothers Heron, of Indiana, and Shaffer, of Iowa, and from the discussions they shall elicit.

Again: An exhaustive system of agriculture by grain raising is almost always the first in any new country. How long can it be kept up? Ought Boards of Agriculture to exercise any influence upon the question? When shall stock feeding come in more fully to help to restore the wasting fertility? What is the relation of stock feeding to grain growing? This question is worthy of our consideration and will be discussed by Mr. Wales, of Ohio.

Again: Can State Boards secure promptness and accuracy in reporting the growing and recently harvested crops, and if so, how? Is this an important matter now, and are the times and the farmers and the press and the legislators ripe for it, or not? In this and other matters, what should be our relations as State Boards to the Department of Agriculture at Washington? On these and other points we hope for much aid from the ripe experience of Secretary Fisher, now at the head of a successful Crop Report Bureau in this State, and of Dr. R. T. Brown, an ex-member of the Indiana Board, and former head chemist of the Department of Agriculture at Washington.

These are some of the questions that will come up for our earnest, thoughtful consideration and our wise adjustment.

THE RELATION OF STATE BOARDS OF AGRICULTURE TO THE NATIONAL DEPARTMENT OF AGRICULTURE.

BY DR. R. T. BROWN, OF INDIANA.

The United States has, no doubt, superior manufacturing facilities and rich fields of mineral wealth, while our extended coast line, our great rivers and our long chain of lakes mark our advantages for both domestic and foreign commerce; and yet these several sources of individual and national wealth are, and always will remain subsidiary to our agricultural interests. The production

of food and clothing will always be the leading business of the people of these States. We will wisely diversify our labor no doubt, but still, the center around which all our productive industries must revolve is agriculture, in its broadest and most comprehensive sense—the creation of the raw material from which the food and clothing of the world is made. If this is true, then it follows that a government of the people and for the people should find its first duty in a careful protection and promotion of agriculture.

But neither the State nor national governments have devoted more than a casual and indirect attention to this great interest. Take for example, my own State of Indiana: Our farm products in excess of our consumption, which annually becomes fixed capital, amount to at least \$50,000,000. This goes on the tax duplicate every year, and if it pays but one per cent. on that sum it puts into the treasury half a million of dollars. Out of that sum our Legislature appropriates to the State Board for the encouragement of agriculture the sum of \$1,000. Among the least appropriations made by Congress is that for the support of the department of agriculture. And while that department is placed at the head of the largest and most productive interest in the United States, and one which ultimately pays the largest portion of the revenue, yet it attracts the least attention of anything at Washington.

The very important position of Commissioner of Agriculture is too often filled without regard to qualification for its very complex duties, or any other considerations, than his political or personal relatives to the appointing power. There is no appointment in the patronage of the President that should be made with more care and circumspection than that of Commissioner of Agriculture. He has under his supervision, a statistician, a chemist, an entomologist, a botanist and microscopist. In order that he may intelligently direct each of these divisions of his department, the commissioner should have a fair knowledge of the science involved in them severally, and this demands a man of broad and general scientific attainments. To all this he must add a practical knowledge of the art of farming, and a broad and comprehensive common sense. Such men are not plenty, yet they can be found, but not without diligent search. The several State authorities come in contact with the agricultural interests at two points, viz: The agricultural colleges and the State Boards of Agriculture. The misfortune that paralyzes the active usefulness of both these institutions is, that while they maintain only an indirect relation to the State, they have no relation to each other, nor to the department at Washington. The result is, that neither realizes the usefulness it is capable of. If the State Board would hold semi-annual sessions, jointly with

the faculty of the agricultural college, and determine the several points to be settled by experiment, the manner in which these experiments are to be conducted, and by whom and under whose supervision, much good might follow. At the end of the year, the results of these experiments should be reported to the State Board, and through it, to the department at Washington. The commissioner, with the assistance of his several heads of divisions, should carefully examine and compare the results of these experiments where they bear on the same points, and observe the influence of local conditions, such as climate, soil, etc. These investigations, with the notes and comments of the department, should be printed in quarterly reports, to be distributed, not through Congressmen to politicians who never read them, but through the State and county boards to practical, intelligent farmers, who can profit by the information conveyed.

We have the material out of which to construct a complete and very efficient organization of the agricultural interests of this country, but this material lies around loose, entirely unorganized.

We have at Washington what was intended to be the head of a great agricultural organization embracing all the States and territories, but it remains merely a head, with no limbs or body through which to act. In nearly all the States we have boards of agriculture, organized by State legislation and acting within their own jurisdiction entirely independent of each other. I think the present convention is the first attempt to obtain concert of action, in any degree, among State Boards. The initiative of this action should have been taken by the department at Washington, years ago—not, indeed, in the spirit of dictation, but by way of invitation for mutual council and advice, to the end that such relations might be established as would bring all the State Boards into direct communication with the department and through it, with one another and with the various experimental stations and agricultural schools of Europe. In this manner we can make an organization that will be a mighty power for promoting all the industrial interests of the country, for whatever promotes agriculture, advances every other industrial interest. In our county and district societies we associate and combine the ultimate elements of force—the individual farmers; and these societies are brought into intimate relations with each other in the State Boards; now establish similar relations between these boards and the national department and we have a complete system through which information can be collected and intelligence distributed at once throughout the nation. There are but two problems to the solution of which the concentrated talent of the whole country should be directed. These are:

1. How can we obtain the greatest possible amount of value from the soil, with the least possible amount of manual labor? and

2. How can we best maintain, and if possible, improve the fertility of the soil while it is yielding us remunerative crops?

To the first of these questions the attention of American farmers has been chiefly directed, and the achievements of the last half century in this line have been very encouraging. We can certainly produce a given value of almost any crop now with less than half the personal labor required to produce the same result fifty years ago. This end has been reached, not so much by the discovery of new methods of cultivation as by the invention and introduction of new implements and tools of culture. But this result is not by any means uniform over the whole of this country. This defect measures the influence of a want of unity and concert of action between the methods of work in the several States, which is attainable most directly through the central department of agriculture. The productiveness of a given amount of labor is a matter of more importance than is generally recognized. Every improvement, either in the quality of crop, mode of cultivation or implement of culture, should be carefully examined by competent experts, and whatever merit may be found, let it be reported by the State Board to the national department, to be communicated by it to all the State Boards in the quarterly reports, and through these to the county and district societies; that every advance in the productiveness of labor may be known in every part of the country, and everybody who cares to avail himself of it may do so.

If the improved modes of culture and farm machinery in use in these Northwestern States were introduced everywhere, the farm products of the country would be increased in value by millions of dollars, with no increase of manual labor.

The second problem, to-wit: How to grow and sell remunerative crops from the farm, and yet maintain its ability to produce unimpaired, has not received the attention in this country that its merits entitle it to. At this point, we come into contact with another element of agricultural progress which we have barely named. While the county and State boards attend more particularly to the art of farming, the agricultural colleges should have in charge the scientific investigation of such questions as will naturally arise in the practical operations of the farm. In the front rank of these questions, stands the problem of maintaining the fertility of the soil. Chemical analysis will reveal the loss to the soil in each crop sold from the farm, both in amount and kind of material; and the schools should be able to direct the farmer as to how he can best supply this loss. To make a safe and satisfactory solution of

this problem, the indications of the laboratory should be confirmed by carefully conducted field experiments, and the methods and results should, from time to time, be transmitted to the department. and through it, the knowledge thus obtained, should be diffused through the State and county boards. Early attention should be called to the importance of sustaining our soils in their productiveness. It is a great national question. Let our statesmen heed the voice that comes up from the ashes of dead empires. No nation has long survived its ability to feed its population from its own soil. Egypt and China are the only surviving representatives of the great nations of old, and they survive because they have always been able to feed themselves.

I have thus rudely sketched my ideal of an agricultural organization, embracing the whole nation, and diffusing its beneficence, directly or indirectly to all the industries of the country. Let me recapitulate: The several parts of which this organism must be constructed already exist, but in an entirely disorganized state. We have the efficient working organs in our State and county boards, our thinking apparatus in our agricultural colleges, and the directing head in the department at Washington, but being entirely detached, neither can perform its normal functions. The time has arrived when these should be brought into proper relations, and the whole people reap the benefits of this harmonious unity.

WORK OF THE INDIANA STATE BOARD OF AGRICULTURE.

BY ALEX. HERON, SECRETARY.

The paper which I propose to read was prepared for this meeting before the subject was assigned to me, as on the last published programme, therefore you will not be surprised should I not "stick to the text." My purpose in the paper was as an introduction, to show what we are doing in Indiana, and compare notes in order to counsel together for mutual interests.

As a representative from Indiana in an Inter-State Agricultural Convention, we will endeavor to give a brief report of the work of our Board of Agriculture, which has been in existence for twenty-nine years. During this period the work of the Board has increased in proportion to the progress of the agricultural interests and thus aided in many ways to facilitate the rapid improvements in every branch of farming.

The agricultural and manufacturing interests are so interwoven

as to be inseparable. The success of the farmer insures prosperity to manufactures, and without the aid of improved machinery and the demand for the products from the manufactures, the agriculturalists would make slow progress. Our board realizes this fact as of paramount importance. Their object and aim is: "To promote and improve the condition of agriculture, horticulture, mechanics, manufacturing and household arts." According to the wording of their constitution, what an immense field for operation, so broad that no one association could cover the ground.

The annual fairs show progress and prove results, and thus aid individuals to compare notes in every sphere of industry with grand results, but in order to more thoroughly develop and distribute this information, we have State Industrial Associations organized for each special branch of agriculture, each working in harmony with and under the auspices of the board. And to complete the grand combination of industrial pursuits, the Woman's State Fair Association is now organized, and in the second year of its existence, with every encouragement from successful working as an auxiliary of the board, in connection with the State Fair, as shown in our annual reports.

The organization of those specially interested in the different branches of agricultural industry has been productive of good results. They take up questions and persist in the investigation more thoroughly than could be expected from a promiscuous body, or general meeting of farmers.

With the rooms of the board for headquarters, and mutual aid from these associations, the board is greatly assisted in promoting the agricultural interests. These organizations (except the State Horticultural Association) have all been organized within a period of nine years, and with one exception in the office of Secretary of the Board of Agriculture.

The National Association of Short-horn Breeders, and Swine Breeders, were also first organized in the rooms of the board.

The second annual meeting of the National Agricultural Congress was held in the same room.

The National Poultry Association have met with us. And the National Butter and Egg Convention was organized there, and has been with us twice.

The Indiana Board of Agriculture is the first on the list of State Fairs, to remove all limits of competition. The first of the States West, to own State Fair grounds, and with the largest and best buildings thereon for exhibition purposes, and run their State Fair at half the price of admission charged by other States.

The first to pay jurors on awards for their service. The first to introduce the feature of no premium on implements or machinery without a test, with a recognition of merit by committees of experts instead, and the exhibition free of cost to that class of exhibitors. The immense success attending this "new departure," after five years experience is demonstrated by the extent of the recent exhibition in that line, which was limited, only by the space within the enclosure, with forty-one steam engines driving machinery.

The agents of several of the leading agricultural implement manufacturing companies gave it as their opinion that there has never been such a show of implements and machinery in extent and perfection, anywhere, and which gave such general satisfaction.

Much as has been done by the board it may be considered as yet in its infancy, with almost unlimited bounds for usefulness. It is now as a main stream, with the almost complete system of State associations as branches or auxiliaries, through which is gathered and concentrated the practical knowledge of experience, and embodied in the annual reports of the board which are sought after far and near.

The practical benefits of these special associations is strikingly illustrated by the results from the State Tile Makers' Association. Fostered and encouraged by the Board of Agriculture, this organization has grown to such proportions as to require a monthly publication (*The Drainage Journal*) to embrace their proceedings and meet their desire for information. The result is about 460 tile manufacturing companies are in successful operation within the State, the benefits of which it would be difficult to estimate. The early settlements were greatly retarded in consequence of the malaria from the rich low lands, and heavy undergrowth which is now subdued. "The dark forests have disappeared, the wet lands have been drained, and malarial diseases no longer prevail."

Under the auspices of the board the Geological department of the State was established and controlled, revealing millions of wealth in the Indiana block coal, and developing fifty square miles of the best building stone as demonstrated in the investigations made necessary for our new State house.

During the twenty-nine years of existence the board has expended in premiums over \$200,000 in the interest of progress and improvement. Of the ninety-two counties in the State, eighty-one have agricultural societies and twenty-one district societies. All are in good working order.

The usefulness of the board has been very much retarded in years past by the want of authority to collect statistics with promptness. This difficulty is now overcome in a great measure by the

creation of a Bureau of Statistics now in the second year of its existence, and a decided success under the superintendence of Prof. John Collett as chief. The object of the bureau is to make annual reports of the agricultural and manufacturing products, and give the vital, social and commercial statistics of the State. Ten thousand copies of the first report, in a condensed form, for foreign distribution have recently been issued and distributed.

The subject of crop reports has been perhaps the greatest drawback with which the officers of the board have had to contend. Every effort was made to inaugurate a system of quarterly reports in 1877, which for reasons of economy was not adopted. A paper read before the delegate board at that time set forth the importance of quarterly reports which we will here quote from, and assert that the object of such reports will not be complete without such reports from each State being sent to one grand center under the auspices of the general government, there condensed and so reported back through the State Board to the county agricultural societies, and thence to townships and districts.

"Statistics are necessary for the promotion of general intelligence." They serve to show the increase or decrease in the amount of products as compared with former years, and to regulate prices from a commercial standpoint. The present limited and slow facilities for collecting statistical information, answers the purpose first named, but one of no political use for the latter, when the statistics are not procured until the crops are disposed of.

The monthly reports of the national department of agriculture have been the means of creating a spirit of inquiry into the best mode of securing early and prompt reports of the crops. These monthly reports are educators to a more uniform system for all the States, and in criticising some of the most voluminous, we conclude these are a waste of labor and expense, in some of the detailed matter, which is almost worthless when not condensed, and often classed as dead matter by reason of delay, especially in reference to the condition of growing crops. During the growing season it is of little interest to read of the condition of crops two weeks past, when seasonable weather has made wonderful changes.

There is a growing demand for prompt and reliable information as to the crops in season, and to be practicable, it must be uniform in all the States. In the estimates of the principal crops for a single State, the result would frequently lead astray in such a vast extent of territory on which is grown our principal crops. A failure in any one locality of any crop, will scarcely effect the prices, when extra good crops in distant States (as is frequently the case) with cheap transportation, keep the prices regulated.

It is often the case in seeking information for crop reports, that we are met with the discouraging remark that all efforts in that direction, benefit the speculator more than the producer. We admit the point well taken and true to a certain extent, but it is, nevertheless, a protection to the agriculturist in disposing of his produce, as the dealers have facilities for their own special benefit, and information at all commercial centers. It is the freshness of such information that makes it valuable, and it is useless if not furnished promptly.

We will venture the assertion that any efforts to secure reports of crops for the farming community *alone* will result in failure, as so small a proportion of that class can be reached promptly. All such reports are more readily transmitted to the commercial community, therefore quarterly reports are as often as can be of practical use to the farmer. The winter (January) report, devoted to the live stock interest, the spring (April) report to acreage of spring crops and condition of growing wheat, the summer (July) to the estimates of grain crops, and condition of the corn and fruit crops, and the fall or October report to the estimate of all the farm products.

The enterprise of the leading dailies in the great commercial centers in giving such extensive and prompt telegraph reports of the crops in the growing season do away with the necessity of monthly reports from less prompt sources.

During the fifth session of the National Agricultural Congress at Philadelphia, a committee of three, consisting of Hon. J. R. Dodge, Hon. T. P. James and Hon. Alfred Gray, were appointed with power to appoint sub-committees in the several States and territories, whose business it should be to secure uniform legislation in the several States and territories on the subject of the collection of statistics, and such legislation by the United States as shall give full and reliable information in regard to all branches of agriculture. We looked forward to the report of that committee with high hopes of securing what was needed. If there was anything done by that committee it should be looked up for the use of this convention.

The convention assembled on the morning of the third day to conclude the business of the session, which resulted in the adoption of the following report from the committee on resolutions:

Resolved, That this convention, composed of delegates from the Boards of Agriculture of the principal stock and grain raising States of the west, do unanimously adopt the following resolutions:

1. That we believe the time has fully arrived when each of the States represented by us should undertake the work of issuing

prompt and accurate monthly crop and stock reports during the growing season.

2. That in our opinion uniform and concerted action among these States in this matter will secure results most valuable to the agricultural and business interests of the country.

3. That we pledge ourselves to use our best endeavors with our own boards and legislatures to secure the necessary legislation to make this work thoroughly efficient, and that we believe it to be the duty and for the interests of legislatures to furnish liberal annual appropriations for the prosecution of a work already heartily endorsed by press and people.

4. That in order to determine the fair market value of the annual grain and live stock products of the United States, it is necessary to obtain the earliest and most complete information attainable as to the extent of the foreign supply of grain and live stock, and the surplus for the markets of the world, and the proper officers of the government are therefore earnestly requested to obtain through the consular and other foreign service of the United States, the most complete possible data concerning the extent of the annual production of grain grown in foreign countries, and the condition of the growing crops as the season advances.

5. That the information so obtained be given to the associated press, and be forwarded through the National Department of Agriculture, to the several State Boards of Agriculture, at the earliest practicable date after receipt.

6. That the several State Boards of Agriculture, collecting live stock and crop statistics, are requested to reciprocate and forward such reports to the national department of agriculture, as promptly as possible.

7. That this convention recognizes the importance of the press as the great medium for the dissemination of information concerning the condition and extent of the various crops, and that this convention, therefore, urge upon all engaged in collecting agricultural statistics, the importance of furnishing the press, at the earliest date, after receipt, the condensed results of the agricultural statistics collected.

8. That an executive committee, to be appointed, are hereby authorized to prepare a uniform system of blanks, adapted to carry out the proposed work of this Inter-State Agricultural Convention, in the collection of crop and live stock statistics.

9. That all the grain and meat producing States of the west and south be cordially invited to unite with us in our next meeting, to be held next year at the call of our executive committee.

On motion of Mr. Heron, the resolutions were taken up, separately considered and adopted.

The committee on permanent organization made the following report, which was, on motion of Mr. St. Clair, adopted:

Chairman Inter-State Agricultural Convention:

The committee on permanent organization would recommend the appointment of an executive committee of nine, to whom is delegated authority to call another meeting of the Inter-State Agricultural Convention, at such time and place as they may deem advisable.

Respectfully submitted,

S. D. FISHER,
ALEX. HERON,
CLINTON BABBITT,
Committee.

Motion of Mr. Brockaway, carried, that the executive committee consist of the Secretaries of Boards of Agriculture of the States of Ohio, Illinois, Kansas, Iowa, Indiana, Nebraska, Tennessee, Minnesota and Wisconsin.

Motion of Mr. Chamberlain, carried, that the assistant secretary have 2,000 copies of the proceedings and papers, read at the meeting, published in pamphlet form, and that the Treasurer call upon the several State Boards of Agriculture represented for their *pro rata* share of the expense of printing; and that the several States represented have the same number of copies of the proceedings.

The following resolution, introduced by Mr. Wing, of Ohio, was adopted:

Resolved, That the thanks of this convention be extended to the President, Dr. R. T. Brown, for the courteous and impartial manner in which he has discharged his duties as presiding officer, and to Secretary Fisher and his able assistant for the valuable aid rendered this convention.

On motion of Mr. Babbitt, the convention adjourned, subject to the call of the executive committee.

R. T. BROWN, *President.*

J. K. HUDSON, *Secretary.*

THE WOMAN'S STATE FAIR ASSOCIATION OF INDIANA.

SYNOPSIS OF PROCEEDINGS FOR 1880.

Directly after the action of the State Board of Agriculture, Feb. 18, 1880, placing the "Woman's Department" under the management of the Woman's State Fair Association, and appropriating \$1,000 for the expenses thereof, the association appointed a committee to revise the premium list for the woman's department and to increase the amount of premiums to \$550. Their committee carefully revised the list, adapting it as nearly as possible to the wants of the different classes of exhibitors, and appropriated \$83 of the amount allowed for premiums in a childrens' department open to girls and boys under sixteen years of age. The report of the committee was accepted by the association, March 30, and several rules recommended for the government of the exhibit, adopted. At this meeting it was decided to make an effort to secure a list of special premiums for the work of women and children, and several members volunteered to solicit such premiums. Twenty-six premiums, amounting to \$170.50, were obtained.

During the summer the Secretary, Miss Mary D. Naylor, mailed 686 premium lists, sent out 33 letters and 125 postal cards in the interest of the association.

Beginning on August 17, the executive board met once every week until the opening of the fair. Delegates were sent to visit county fairs and to solicit exhibits of woman's work, as follows: Mrs. M. M. Finch, Knightstown, Henry county; Mrs. M. E. Haggart, Danville, Hendricks county; Mrs. A. M. Noe, Marion, Grant county; Mrs. Warren, Terre Haute, Vigo county; Mrs. Annie Bryan, Franklin, Johnson county; Miss M. D. Naylor, Kokomo, Howard county; Miss Ida A. James, Edinburg, Johnson county.

The management of the woman's department during the fair was exceedingly satisfactory to exhibitors and visitors. Mrs. Haggart, as general superintendent, directed the repairs, improvements and purchases, allotted space, decided controversies, etc., and by her untiring

energy and wise supervision systematized the work and harmonized the workers. The different classes of articles were divided as nearly equal as convenient into six portions, and assigned to the care of the following ladies: Mrs. Noe, Finch, Stowell, Townsend and Campbell and Miss James, who were termed department superintendents. Each lady arranged the articles under her charge, kept them in order during the fair, and carefully gathered them together in readiness for their owners at the close of the exhibition. By this system the exhibit was more accurately classified and more artistically arranged than ever before, and the constant watchfulness of the department superintendents made them equal to as many blue-coated, brass-buttoned gentlemen of the mace, in preventing theft. Only one article was lost from over one thousand on exhibition. The awarding committee, carefully selected some weeks before from different sections of the State, were efficient and painstaking, and their decisions, with few exceptions, gave satisfaction. Further details of the management of the department will be found in the general superintendent's report. It was found that the special premiums added considerably to the attractions of the department and increased the number of exhibitors.

After the fair the disbursing committee held several meetings to audit claims for expenses and labor in the woman's department. (See the general superintendent's report for a full exhibit of finances.)

JANUARY 4, 1881, 10 A. M.

The association held the first session of its first regular annual meeting, under the constitution adopted March, 1880. The principal business of this meeting was the consideration of what recommendations should be made in the president's report to the State Board of Agriculture. In the afternoon of the same day, Mrs. Mary E. Haggart, as president of the association, general superintendent of the woman's department, and chairman of the disbursing committee, submitted her annual report to the State Board of Agriculture. The report and its recommendations were referred to a committee, who reported Wednesday morning. [For these two reports, see regular proceedings of the State Board of Agriculture, in the first part of this volume.]

WEDNESDAY MORNING, JANUARY 5.

The association met in the rooms of the State Geologist. The secretary being absent, Mrs. Adkinson was appointed to record the minutes of the meeting. By consent, the reading of the annual reports was deferred until the completion of other business. After the transaction of some miscellaneous business, motion was made

and adopted, that the constitution and by-laws be read by sections, with view to making some amendments. Article 3 was amended by inserting the words in brackets, making it read as follows:

Applicants for membership shall be recommended by a member of the association, at any meeting, and by consent of the majority of the members present, [and upon signing the constitution,] shall be received.

Section 3 of the by-laws, was amended so as to require the secretary to be a resident of Indianapolis. No other changes were deemed necessary.

The association then proceeded to the annual election of officers, with the following result:

President, Mrs. Mary E. Haggart; vice-president, Mrs. A. M. Brown; secretary, Mrs. F. M. Adkinson; disbursing committee, Mrs. M. E. Haggart, Mrs. A. M. Noe, Mrs. M. M. Finch, Mrs. F. A. Townsend, Miss Ida A. James.

Mrs. Haggart read the report submitted to the State Board of Agriculture the day before, and Mrs. Adkinson read the itemized financial exhibit filed with the Secretary of the State Board. These reports were favorably received and adopted. Adjourned.

FEBRUARY 8, 2 P. M.

The Executive Board met to consult with the State Board of Agriculture, concerning the recommendations made by Mrs. Haggart, in her report of the woman's department. At the morning session of the State Board, the matter was referred to a committee, consisting of Messrs. Haynes, Sunman and Custer. This committee reported in the afternoon, recommending the adoption of part of the measures, and referring the others to the State Board. After a lengthy discussion, in which, by courtesy of the State Board, the woman's executive board participated, the State Board of Agriculture adopted the following recommendations:

That \$1,000 be appropriated for payment of premiums and current expenses in the woman's department.

That \$200 additional be appropriated for permanent improvements, decorations, etc.

That all work done by women not entered to compete for premiums in other departments be included in the woman's department.

That the association shall have complete control of the woman's department.

It was finally held in the discussion on this point, that the words complete control should mean complete control, and include the right to sell or rent space.

That the association be allowed to disburse all moneys except for payment of premiums.

That the association shall select the awarding committees for the woman's department.

The request that the moneys earned by the association be allowed to remain in their treasury, was amended to read "remain in the general treasury of the State Board."

On Thursday afternoon, February 10, Mrs. Adkinson, as representative of the executive board, submitted to the State Board of Agriculture, through Mr. Mutz, who moved its adoption, the following resolution :

WHEREAS, The Women's State Fair Association in 1880, earned the sum of \$16 by the renting of show cases in the woman's department, therefore be it

Resolved, That the Woman's Association is entitled to that amount in addition to the regular appropriation, to use for the prosecution of general State work.

Adopted without a dissenting voice.

The action of the State Board of Agriculture at their February session clearly defines the authority, jurisdiction and means of the Woman's State Fair Association for 1881. The members and officers of the Woman's Association duly appreciate the confidence reposed in their judgment and integrity by the State Board, and take pleasure in acknowledging the courtesy and co-operation of that body, in the work of promoting women's industrial interests.

FLORENCE M. ADKINSON, *Secretary*.

INDIANAPOLIS, IND., March 1, 1881.

SHORT-HORN BREEDERS, 1880.

TUESDAY, MAY 25, 11 A. M.

The association met at the rooms of the State Board of Agriculture, and in the absence of the president, Robt. Mitchell, Hon. Thos. Nelson was appointed temporary chairman.

On motion of W. W. Thrasher, the chair appointed J. W. Marlatt, W. W. Thrasher and T. W. W. Sunman committee to employ a reporter for this meeting, said committee to report at 1:30 o'clock, to which hour the association adjourned.

AFTERNOON SESSION.

The committee appointed at the morning session reported having secured the services of a reporter for twelve dollars until tomorrow noon, or fifteen dollars if the session extended over that time. Adopted.

RESOLUTIONS ON THE DEATH OF JUDGE CRAVENS.

W. W. Thrasher offered the following:

WHEREAS, In the Providence of God, who rules the destinies of men and nations; our beloved citizen and ex-president, Judge Cravens, has been removed from us by death; therefore,

Resolved, That we feel that we have lost a valuable member of our association, a good citizen, and that we cherish his memory with grateful recollections, and deeply sympathize with his family and friends in their loss; and that our secretary be authorized to mail to his family a copy of this resolution.

J. W. Robe seconded its adoption.

REMARKS.

W. W. Thrasher, I feel like I could hardly let these resolutions pass without some few remarks. I have known Judge Cravens a number of years, and can vouch for every thing that is said in the resolutions and for some things that are not said in them. He was what we call a self-made man; a man among us common

men—farmers. He made his mark for good, and was honored by the citizens of his county in being elected judge of the court, a position he filled with satisfaction to all concerned. He was what we call one of our common men, and yet he rose above that and became more than an ordinary citizen. Such merit, I think, should be always eulogized. He was a good, hospitable friend to all about him, and I regarded him as an excellent man. In his death we have lost a valuable citizen.

Thomas Wilhoit. I have been intimately acquainted with Judge Cravens a number of years. I found him one among our best men; an enterprising man. He was, as has been stated, elected judge and he made a first-class official. He was starting out as a young man in the short-horn business, and was making the right kind of a start.

S. F. Lockridge. I knew our former associate many years and know him to have been all that is said of him in the resolutions. I think it is proper that such a resolution be passed by this association.

Thomas Nelson. I had considerable acquaintance with Judge Cravens, while a member of the State Board of Agriculture, and can endorse all that has been said in these resolutions. I met him last at the Butter, Egg and Cheese Convention in this city two or three weeks ago. He was complaining of ill-health then, but I didn't think he was so near his end.

The resolution was adopted.

J. W. Robe, of Greencastle, read the following essay

THE MILKING QUALITIES OF SHORTHORNS,

HOW DEVELOPED, HOW MAINTAINED, AND AT WHAT AGE TO BE BRED
IN ORDER TO DEVELOP THE BEST MILKING QUALITIES.

This is a subject full of vital importance to every short-horn breeder, and I may say to the whole country; and one upon which at least half their utility depends.

I do not intend to attempt to say all that may be said in their favor as milkers upon this occasion, but to speak of some of their ancient dairy qualities, and show how well they have been and many of them are yet adapted to the dairy and as family cows, and why they should be the exclusive cattle of this country.

I am aware that an impression does prevail with some that short-horns will do for beef, but they are poor milkers.

It is a fact that many of our short-horn breeders have given their attention to the form and symmetry of the body and to fancy pedigree, to the neglect of the milking qualities, to a great extent,

till some are badly impaired as milkers, and from this the impression has gotten abroad.

The short-horns gained their first notoriety in England for their wonderful milk and butter producing qualities, where they long have stood high as the chief dairy stock; because they combine the milk and beef qualities in the same animal.

But this quality of the short-horns has been lost sight of by many of our American breeders in their zeal to produce a fine symmetrical form, till, I must confess, they have deteriorated to some extent in this particular in our hands; still the milking qualities are inherent in the race, as every handler of them very well knows, for it frequently crops out in every family in spite of all their efforts to repress it.

The beef production should not be neglected, but the same is true of the milking qualities, and had the same attention been given to the milking qualities as to the beef productions, for the last quarter of a century, the short-horns would have been quite as renowned for their milking qualities as for their present beef productions.

In the wide beef-producing districts of our country there has been a great temptation, no doubt, to disregard the milking qualities, as milk was of little consequence beyond that of raising a fine calf. And hence many have given no thought or care to the production of milk, and sufficed it to pass unnoticed, and consequently deteriorated in this respect.

- [The value of cattle, as of everything else, depends on their adaptations to the purposes intended. The breed that fills most completely all these requirements will be the most sought after, and consequently will command the highest price.

Cattle are bred chiefly for beef and milk. As a beef-producing breed there is no animal that equals the world-renowned short-horn.

I ask, then, can they possess first-class beef qualities and first-class milking qualities at the same time? I answer most assuredly these two qualities can be combined in this matchless breed. The cow of this breed has every requisite to manufacture food into milk on a much larger scale than any other breed, because she has large digestive organs and is capable of using them to this purpose if so encouraged. And then, when no longer wanted to raise calves of the highest value and give milk, she is quickly fattened and turned to a good account with the butcher.

The aim has been of many short-horn breeders, if we may judge by their actions, to produce a fine beef animal alone, which practice should be discontinued, for by proper care the fine beef animal and

the excellent dairy cow may as easily be combined in this breed as the one quality alone.

Is the short-horn cow just what she might be as a dairy cow? I certainly think not. It is true that many of them have been so managed as to damage greatly their milking qualities, because more money could be made out of them by high feeding to be sold for fancy and show purposes than for milkers.

That the milking qualities of the cow may be damaged by improper management and neglect, there can be no doubt.

Let us turn now and examine something of their ancient character, as milkers by Mr. Youatt, who is the oldest and best authority that can be had. He says: "From the earliest period of which we have any account of our breeds of cattle, the counties of Durham and York have been celebrated for their short-horns, but, principally, in the first instance, on account of their reputation as extraordinary milkers. To recite their recorded feats at the pail, would be to invite incredulity, but it may be asserted on the best evidence, that taken as a breed, they have never in this particular been equaled." Again, he says: "In every instance they have shown themselves superior milkers, and stand to the pail till within six or eight weeks of calving, and, in several instances, they have never been dry since they first calved, and it is by no means uncommon for them to yield thirty to thirty-six quarts per day, and make twenty pounds of butter per week."

The point I wish to make here is, that as they were originally a matchless milk breed, anything that has been lost by breeding alone, for beef and beauty, may soon be restored by carefully breeding for both milk and beef.

As to the general excellence of the short-horns, for the production of beef and milk, in those times, the following is cited from the same very high authority: "The number of cows kept for the purpose of supplying the metropolis (London), and its environs, with milk, is about 12,000." They are, with very few exceptions, of the short-horn breed. * * * The universal preference given to this breed by such a body of men, differing materially on many branches of the treatment of cattle, is perfectly satisfactory as to their value, and that on three distinct points. (1) As to the quantity of milk she returns. This, however, is not all, though it may be the principal thing which enters into the calculation of the metropolitan dairymen. * * * The proprietor of the large dairy is also a dealer in cream, to a considerable extent, among these people; is also a great manufacturer of butter, for he must have milk enough to answer every demand, and that demand is exceedingly fluctuating; then it is necessary that the quality of the

milk be good, in order that he may turn the overplus to a profitable account in the form of cream and butter.

The employment of the short-horn cow in all the dairies is convincing proof that her milk is not so poor as some have described it to be. It is the practice in most of the dairies to fatten a cow as soon as her milk becomes less than four quarts a day. They are rarely suffered to breed while in the a dairyman's possessions. The fact of their being so often changed, is proof that while the cow gives a remunerating quantity of milk for a certain time, she is rapidly and cheaply fattened for the butcher as soon as her milk is dry. Were much time or money employed in preparing her for market, this system should not answer, and would not be so universally adopted. Fattening and milking qualities can, therefore combine in the same animal, and they do so here.

This is very high testimony as to the excellence of the short-horn race, both as to milk and beef, and shows that milk was one of their chief qualities in England, and, if inherent in the race, it may be readily developed in it again by properly breeding and feeding with an eye to milk and butter.

In Mr. Bell's "History of Short-horns," we find the remarkable record of the cow Barfoeth (the dam of Hulback's grandsire), giving thirty-six quarts of milk a day, and making twenty-four pounds of butter per week.

Mr. Allen, in the second volume of the "American Herd Book," speaking of the early importations of short-horns, says: "There was one ruling quality among them; they were almost without exception, capital milkers."

These facts abundantly show that they come originally from the very best dairy cattle, and if they do not now stand at the head of the dairy class in every particular, they have the latent qualities in them that will enable them very soon, if given a chance, to stand at the head in milk production, as well as in beef.

Much later in their history, Mr. Allen, in his "History of American Cattle," says: "They (the short-horns) are the greatest milkers in quantity of any breed whatever, except the Dutch, as innumerable facts have shown. We have numerous well authenticated instances of their giving six, seven, eight and even nine gallons per day, and making fourteen to eighteen, and some as high as twenty and a half pounds of butter per week. Our own observation, in more than thirty years' experience, with hundreds of them, first and last, is, to ourselves, abundant evidence of these facts."

In his "History of Short-Horn Cattle," he also says: "Our history has fully shown that from the earliest period, the short-horn cows, as a rule, were large milkers, and when cultivated with a view

to dairy purposes, no animal of any breed excelled, and few, if any, equaled them. When milk has been the main object in their keeping, no cows have made larger yields, according to the consumption of food, than the short-horns. Even in our own time, we have frequent records of cows giving from twenty-four to thirty-six, and even forty quarts per day, and the yield of butter has been correspondingly large."

Numerous notes may be found attached to the pedigrees of cows, in the several volumes of the "American Herd Book," attesting these facts.

These statements are sufficient to prove that, if there is any want of milking qualities in the present short-horns, it is due entirely to the present breeding, for it is most certain that the ancient short-horns were good milkers, and combine both milk and beef in the same animal.

I find these facts standing out very full and prominent in these authors, and that the short horns were celebrated for their aptness to give great quantities of rich milk. Every one at all acquainted with the breed will call to mind more or less cases, similar in every respect, and which bears abundant testimony to the excellency of the dairy qualities inherent in their organization.

Professor Arnold, in his late work on "Dairying," bears testimony to the high inherent milking qualities of many of our present short-horns. He says: "It is doubtful whether there has ever been any better milk stock than the original short-horns, and they still have a most persistent tendency to transmit that quality to their descendants, and where a deep milking tendency has not been counteracted, or where it has been the least restrained, as in the Princess family, it has remained nearly in its original state and is transmitted with most remarkable certainty."

The same author speaks well of the quality of the milk. "The globules are of good size, cream rising readily. The percentage of cream liberal and of good quality. The milk is about equally well adapted to butter and cheese and marketing in cities."

With this evidence before us, the conclusion is inevitable that attention only is requisite on the part of the breeder to restore and perpetuate this quality in any desirable extent in all our present short-horns. It must be done by carefully selecting bulls out of cows known to possess great merit as milkers, by judicious feeding to develop the milk secretions, and stimulate the inherent milk qualities that have been by some breeders entirely disregarded. She may be made the very first-class dairy cow of this country. That this quality of abundant milking in the short-horns exists no breeder of them for a moment doubts; and if the breeder's atten-

tion be turned solely to the dairy qualities, he can succeed beyond "a reasonable doubt" in obtaining, with very few exceptions, extra heavy milkers. So if a breeder turns his attention, regardless of milk, to the grazing qualities of his short horns, he can gradually breed out the tendency of large milking, beyond a sufficiency to to raise a calf, and it is to be regretted that the tendency of too many of our breeders has been to this end.

The dairy interest is attracting wider attention to-day in America than ever before, and justly so, too, for it is the source of a large export trade, besides supplying a great market at home; and we should develop our short-horn cows to the growing demand for dairy stock and deep-milking breed, combining first-class beef and milk.

Generally speaking, the cow on the farm has never received her due proportion of credit for what she really can do in the success of the farm, nor has her blood and qualifications been so carefully studied as they should have been.

She produces a calf annually, which at two years old may be made to weigh 1,600 pounds. She produces 6,000 to 8,000 pounds of milk, out of which may be made 300 pounds of butter annually. A breed of cows that would combine these qualities is deserving of great credit in the success of the farm. Indiana is the natural home of the famous blue-grass, and will be the natural home of short-horn dairy cows not long in the future.

The small, ill-formed breeds, which some claim to be superior butter cows (not milch cows), do not produce a calf which for beef at four months old will command \$8, nor at two years old weigh over 600 or 700 pounds, and of very inferior quality for beef at that. The calves, in fact, are almost worthless, except the females to raise for cows, for the same purpose. Those who want the ill-formed cow for a small quantity of rich milk and "deacon" the calves at birth, the Jersey is just the cow. But the cow that is to supply our cities and our co-operative butter and cheese factories with milk, must come from the short-horns and their grades.

Here the amount of milk must not be the only important consideration. This, depending on one source of income, or playing upon one string, has long since been exploded as an unsafe policy. The farm stock must be so selected and combined that it will produce the most milk and beef, and they must be combined in one animal. Separate animals for separate purposes can not be tolerated on the farm.

The coming cow must be of as pure beef stock as possible, as well as of the best milk-producing breed. Here let me say distinctly,

the Jersey is a good butter cow for her inches, but she has not inches enough to hold her own in a long contest with those of greater weight and carcass; nor has she been subjected to the same rude tests on pinched food as most other breeds have.

In the January (1880) number of the National Live Stock Journal is a very forcible demonstration of this fact. Mr. I. Boies, of Illinois, has a herd of about one hundred cows of high grade short-horns that yielded 314½ pounds of butter last year. Mr. O. Bronson, of New York, has a herd of twenty natives that averaged 247 pounds and Mr. O. C. Blodgett, of New York, also has a herd of twenty-five Jerseys. Their average yield was 234½ pounds of butter per cow. Mind, now, the natives and the Jerseys both have greatly the advantage of the short-horn grades in numbers. The short-horn grades averaged eighty pounds of butter per cow more than the Jerseys and sixty-seven and a half more than the natives.

That the two qualities of beef and milk may be combined in the same animal of the short-horn breed scarcely needs further consideration. The character of the short-horns for beef I take to be sufficiently established. That the other may be had is sufficiently proven by the ancient short-horns, who possessed it in an eminent degree, and that it is possessed by many at the present time is true.

High grades in great numbers may be found that possess these two qualities in an eminent degree. This being true, it is certainly bad policy to breed a stock that possesses but one of these qualities.

Now we come to the second part of our subject, and I think it may most naturally be treated by transposing it, thus:

At what age should heifers be bred in order to develop the best milking qualities, and then how develop and maintained?

At what age heifers should be bred in order to develop the best cow will depend very materially on how she has been cared for from calthood up.

The calf is the making of the cow, and if the young animal is neglected and stunted, the development of the future animal is seriously impaired. As a rule, females should not be coupled till verging on to maturity, but if the young heifers have been fed on good muscle-forming food, such as will give a rangy frame and a fine muscular development, with growth unstinted, I would think they might be coupled at from fifteen to eighteen months old, owing to their growth.

They should be kept growing thriftily, without fattening, for if made fat, this will give a tendency to fatten in their development into cows, instead of giving more milk. Heifers should be bred as early as their growth will permit, in order to bring into action the milking faculties, as they are more easily stimulated when young

than if neglected, and allowed to run till twenty-four or thirty months before breeding; they will make more docile cows and prove better milkers, and there will be quicker profits, also, in having her come to be a cow as young as possible.

These heifers are quiet flexible in the hands of the breeders, and may be developed into good young cows of great value, if properly cared for. The effort of the breeder should be to produce a vigorous growth, that the heifer may be well developed into a milker at two to two and a half years old. If mine fail to be bringing a calf at three years old, the butcher gets them sure.

DEVELOPMENT.

I am thoroughly satisfied from my experience with the short-horns, that I can take one that is an ordinary milker, and, by feeding her a milk ration, and giving her the best care to increase her milk, can make out of her a fine milker.

The dairymen in my county (Putnam) say the cows they buy through the county, with their feeding and handling, increase the flow of milk from one-third to one-half. Now, add this to what our short-horns give on an average, as we treat them, and you see we have a heavy milker.

In the part of the county where I live, short-horns and their grades are all that are used for milk cows, and they are giving excellent satisfaction and would not be exchanged for any other known breed. I know one tenant farmer who is the owner of a pedigreed short-horn cow that furnishes milk and butter for his family and some to sell.

Milk contains all the elements of the living animal body in solution, and the cow is the machine that manufactures food into this fluid. She is a chemical laboratory to work up food into milk, and she must, therefore, have a complex variety out of which to elaborate this production, and as you intelligently and liberally mete out food to her, so will she pour out her milk for your benefit. It must be entirely reciprocal; you can not draw upon her bank without first making a deposit, and then she will pay you back with liberal interest. You must carry her slop at night, and in the morning get your pay in milk by drawing it. You never could, and I doubt if you ever will, get something for nothing, and just as you feed intelligently just as sure will you be liberally rewarded. While this is true of all cows, it is almost doubly true of short-horn cows.

There are but few cows so constituted that their milk may not be largely improved, both in quantity and quality, by careful attention to the wants of the cow; and it is my opinion that you may seek

quality of milk in food rather than in breed. [This is a point I should like to hear discussed by the convention.]

As far back as the history of the cow reaches the belief seems to be, both of the learned and unlearned, that the quality of milk may be improved and the flow of milk increased by special feeding to that end. Virgil, in his "Georgics," makes special mention of articles of food peculiarly adapted to cause a "flow of rich milk," while selections and breeding afterward perpetuate the variations that we now have in milk cows. Food must first develop the improvement in milk, then breeding and feeding must continue it.

No one would expect to produce a large flow of milk from straw feed, nor to make a fine quality of yellow butter by feeding cotton seed, no matter what might be the strain of blood in his cow. Milk is dependent for its flavor, quality and quantity upon the food consumed by the cow, but the food must be adapted to the wants of the animal to secure the best quality in either beef or milk. The effect of special feeding upon the quantity and quality of milk has been so often proven to a demonstration in large and small experiments that it is unnecessary to say more upon this point.

I can not close without giving a few figures in comparing the different breeds with the short-horns for beef, though I am sorry I can't lay my hands on later figures, but these illustrate the point as well:

We have 10,000,000 or 12,000,000 cows in the United States, and somewhere near 35,000,000 head of cattle, all told, according to the best guess I can set. The statistics for the fiscal year ending June 30, 1878, shows that we exported 80,040 head of cattle (it certainly is much more this year). About 40,000 head went to Cuba at \$17 per head, and 24,834 head to England at about \$97 per head. Here are the wild-grass fed Texans to Cuba, and the short-horns and their grades to England, the latter selling for 5-7-10 times the price of the former. This is a most remarkable contrast to occur in our different grades of stock in the same year. The weight of the short-horn grades was about twice that of the Texans, but the value nearly six times as much.

Now, suppose our cattle were all Texans, or of some small or ill-formed breed like unto them, what an immense difference there would be in the amount of money they would bring the grazier, besides only large and well-formed breeds can be exported to England and find a market; or suppose all the cattle of the United States were of the short-horn breed how much more money the 40,000 would bring to the United States at \$97 per head instead of \$17 per head.

Really, gentlemen, I feel like we could spare all other breeds a

few pints of milk and a pound of butter and then be a long ways ahead with their broad level backs, fine quarters and excellent grazing quality. These are worth a few pints of milk, at least.

DISCUSSION.

W. W. Thrasher. I indorse the paper heartily, and, with a few exceptions, have but little criticism to offer. That the short-horn breed of cattle are milkers, as stated, there needs no proof, and that they have lost some of that quality is admitted by all. There is some reason for this. The short-horn breed of cattle, when I can first remember, were notorious milkers, almost universally so. It is not so now, but as the paper states, "in spite of anything we can do, it will break out in families, and there will be good milkers, let us do what we will with them." I attribute this falling off in milking qualities, to one or two reasons. I think our present plan of fattening show animals at our fairs, has a tendency to depreciate their milking qualities. I have no doubt of that from my own experience. The fashion now is to feed the animal the year round. They carry it further. They want to keep these show animals breeding, but as soon as they drop the calf, they take it away and let some other cow suckle the calf, and push the cow on for show purposes. That is one reason why our short-horns are not as good milkers to-day as they were years ago. Another thing. Most men that show animals don't pretend to breed them until they are about two and a half years old. That is a mistake. Whenever a calf wants to take a bull, just let her take it. That is nature. Sometimes they will take the bull at a year old, sometimes a little less, owing to the manner in which they were kept. If they are full flesh, and in a growing condition, they will take the bull from nine to twelve months old. Such a course may decrease the size of the animal, but not much. Their milking qualities are better developed in that way than to keep them until they are two years old, before they are bred to the bull. I have a heifer at home, three years old, that has had three calves. It has curtailed her size a little, but she is a beauty, and a good milker. I have had men look at that young cow when she was poor and thin, with her first and second calf; they made fun of her. I didn't like that. She was such a milker that I couldn't keep her up, but as she develops age I can keep her in good condition. Now she is a model cow aside from her milking qualities. In the short-horns are combined the finest qualities for beef and milk purposes. Some claim that the butter is not of so fine a texture as from breeds from Durham stock. I know this, that cheese from the short-horn has taken the premium over all other breeds of cattle, and that their butter is a fine

quality and texture. I don't know that we ought to resort to anything else, when we combine all that cattle are grown for in the short-horn breed.

J. P. Forsyth. I object strongly to breeding calves—"whenever they come into the notion." I don't know that I ever raised a short horn calf that was not just as regular at eight or ten months as it ever was, and I think it would have ruined them to have bred them then; for to have done so would have had a tendency to injure the constitution and shorten life. My notion of breeding a female is to let her run until she is past a year old and then try to breed her along in June or July. I don't want a heifer to have a calf until the grass is up.

As regards the milk,—that is the only thing in my short-horn family that bores me, the quantity—the quality is good. My habit is to put my cows in a lot, turn the calves in to suck what they want and then milk what is left. Some of my cows are giving two gallons of milk over and above what the calves suck. I breed for merit all the time, and buy none of your gilt edged bulls, and never expect to. I would like to ask how these heifers that give such quantities of milk are kept up? I feed bran and corn, corn cut in the shuck; also clover and millet hay. I am not able to keep them up; they go down in spite of all that I can do.

W. W. Thrasher. There is no doubt but that milk can be increased in a cow, not only in quantity but in quality, by good feeding. A cow fed on blue grass will furnish better butter and more milk. It neutralizes the wild taste of grass in the butter. I am satisfied from my own experience and from the experience of dairymen that there is nothing better for milk cows than what we call shipstuff. You may take oats, cut up and put in a good portion of mill feed, which being mixed wet answers for filling up and for the developing of milk. There is nothing better than clover hay for cattle during the winter. You may have a straw stack standing in a good pasture; I don't care how good the pasture is, every once in a while you will see the cattle go to that straw stack and eat from it. Nature teaches them they need something of that kind. Dairymen say that bran is better than shipstuff for developing the milking qualities of an animal; I don't believe it. Shorts is perhaps a little too rich, but I would rather have that than bran. Shipstuff is the article we want to develop the milking qualities of a cow. I am sure we neglect too much this matter of summer feeding. We think the grass is good and that our stock don't need anything else. They do need something else, as the testimony in the case of the straw stack proves. If you give them a good mess of this mixed ship feed once a day, or once every two or three days

it satisfies them, increases the milk in quantity and improves its quality.

Albert Marlatt. My own experience is that calves, when properly kept, will be in heat from six months on, and for one I breed them at about ten or eleven months old for fear some scrubs may get in from the outside and cover them. I notice my heifers that are bred young, as a general thing make very fine milkers. I had one cow last winter that gave seven gallons of milk per day and a number of others that milked nearly as heavy. As for keeping them up I find it hard to do, but the better you feed them the better they do. I think the extra milk and butter you get fully compensates for good feeding.

Governor Williams. I have raised some shorn-horn cattle, and my purpose has been to raise fine calves for beef, and not particularly to sell as breeders and my aim has been to raise them with as little grain as possible. Gave them grass in summer time and also in winter. We can better afford to feed our cattle upon grass than upon grain. An acre of blue grass is worth more than all the hay you get from an acre of timothy cut and cured. If that is true, where is the necessity of sowing timothy and then hiring men to feed it out in the winter. I consider blue grass better than corn, shorts or shipstuff. It is much less expensive and I have always found that young cattle thrive better with that kind of feed. I have no trouble with my milk cows or calves when I have grass for them. I haven't generally favored the breeding of heifers when young. Last year I did let the bull to a few heifers at thirteen months old, but I did it because I couldn't buy such cattle as I wanted to raise for beef. My purpose has been to let heifers run until two years old and then breed them. I have never seen any bad results from breeding young. As to what effect it would have upon the milking qualities I am not able to state.

S. F. Lockridge. I think we have come pretty generally to the conclusion that short-horn cattle, as a race, are the best general purpose cattle in the world, combining to the greatest extent beef, milk and butter producing qualities. We have other cattle that are extra in some of these particulars. The Jersey cattle are the best butter cattle on the face of the earth. The Ayreshire give the largest amount of milk, but not rich milk. The Herfords are the finest beef cattle, but not heavy milkers. The short-horn cattle combine all of these qualities. They will thrive any place upon the face of the earth. The cattle of Scotland do well there, but bring them here and they do no good. The short-horn cattle have been sent to Australia, and over the continent, to Texas and to Canada and they

do well. The general farmer wants a general purpose beast, and when he gets a good short-horn he gets that kind of an animal. That has been my experience.

James Marlatt. I am not inclined to believe that the milking qualities of the short-horn have degenerated as much as Mr. Robe seems to think or fear in his paper. I have been acquainted with short-horn cattle for a number of years. My father bought a cow and three heifers forty years ago. They were fine milkers; in fact, they were milkers to such an extent that some of them were a source of annoyance, because they would kick and it was hard to milk them. My experience has been, and is to-day, that a majority of short-horns have been fine milkers. I raise calves principally for beef. I am satisfied their milking qualities are under-rated by the people. I have one cow that has brought me three calves. I bred her three years ago. She has run out nearly all the time, has never been an extra milker, but raised good calves and has been fat enough to butcher every day since I owned her. I am in favor of breeding heifers tolerably young. I like to breed heifers at two years old, or a little after that. I had one this year that was high bred, but she went until she was over three years old before she had a calf. I bred her a time or two, but she didn't stand.

Thomas Nelson. I have found short-horns good milkers with one exception. I have only a small herd—I think eight families. They are all good milkers except one family, which is worth nothing for milking purposes.

As to breeding them—I don't like to breed them too young. My calves are well cared for, and will take the bull from six months on, if they had a chance. One heifer dropped a calf at thirteen months, but she didn't make a good cow.

Daniel Cox. It has been my experience that when you let heifers run too long they are not near as apt to get with calf as when younger. From twelve to eighteen months is the best time to breed.

Thomas Nelson. My brother had some nice heifers that were bred for two seasons to an old bull, but failed to get with calf. Didn't sell them to the butcher, but the summer they were four years old, he bred them to a young bull, and they are all having nice calves this year.

Daniel Cox. I would rather breed my cows so they would bring calves in May or June when the grass is up.

J. W. Robe. I prefer a cow should come in at her natural time, rather than not to breed her until she would calf upon grass. As to

feeding bran instead of shipstuff. Our dairyman have to buy all their roughness, we don't. We can make the coarse feed out of something else beside the bran. We can take the shipstuff and add the roughness, and get all the filling up the dairymen get out of the bran, with less roughness.

W. W. Thrasher. The best plan to pursue with heifers that go such a length of time without getting with calf, is to take a young bull and turn him in with them, and if there is any calf about them it will come sure. My manner of mixing feed is to take a bundle of oats, cut fine and wet before putting the mill feed in. Every part of the feed will stick to the straw, and it is all taken up clean. I would put a little handful of salt in every feed. A great many persons feed dry bran and shipstuff, but I don't think that is economy. It has been a question with me that I couldn't understand, why bran sells as high as shipstuff. They say it is because dairymen haven't anything else to fill up with but bran.

James W. Marlatt. I feed a considerable amount of grain after hard weather sets in. In feeding cows for milk and butter I have found good clover hay better than any other hay. I use timothy sometimes, but I don't prize it highly. Barley straw is a good thing and they will eat oat straw. I often buy shipstuff and sometimes mix it one-third bran and cut oats and then give hay. I have had good success under that treatment. I feed a considerable amount of cut oats when I want milk. If I don't want much milk I feed corn and hay and maybe a little sheaf oats. I believe if we wet this feed we get a larger return for our trouble. I think the short-horns are the best breed for our western country. I have seen and studied almost every family of cattle in the United States and I am satisfied the short-horns are the cattle for us. I want to know if any one present knows anything about an English cattle called the "Scotts" of England, and why they never come to the United States. They sell higher for beef than any other cattle in the English market.

S. F. Lockridge. I think you have reference to the West Highland cattle, long-horned cattle. They are good in some cuts and bring the highest price in some respects.

J. P. Forsyth. In regard to feeding bran dry. I have been feeding my sheep twice a day, bringing them up to the barn lot every night. I have some troughs in there in which I pour bran every night and morning. This morning, before I started from home, I told the boys they might shear the sheep, and there is not a sheep in all that lot that is soiled with dung or grass. This I attribute to nothing but feeding on dry bran.

Governor Williams. Is there any grass in that barn lot?

Mr. Forsyth. No, sir; but plenty in the pasture.

W. W. Thrasher read the following essay:

THE QUALITIES AND CHARACTERISTICS THAT SHOULD GOVERN THE PRICE OF SHORT-HORNS.

GENTLEMEN—That very many have been misled in this matter to their financial ruin, I suppose, will not be doubted. We have only to look back a few years to see abundant proof of this. There is some cause for this. Cattle are only valuable for their milking and beef qualities. This is the chief reason, or should be, why the short-horn is more valuable than any other breed of cattle, being a more general purpose animal than any other known to me. But in the last ten years this quality has been overlooked, and men run wild on certain families and gilt-edged pedigrees. They seem to lose sight of individual merit. Fabulous prices were paid for gilt-edged pedigree; those that handled them failed and the masses of the people suffered. A good short-horn should be recognized for its individual merit, instead of fancy pedigree without merit.

First, then, in buying an animal we should not lose sight of its individual merits. The animal should stand on its own merit, without a long pedigree to back up a poor and ill-formed creature. When men get back to first principles and buy only those that possess merit in themselves, the mass farmers will be misled less than if fancy pedigrees are relied upon. Indeed, I here state, and think I can prove it, that if there were no pedigrees at all, the masses would be less imposed upon than they are now.

DISCUSSION.

Thomas Wilhoit. I differ with Mr. Thrasher in some respects. I want a good pedigree backed up to prove that I have the animal and then I want the animal with that pedigree. I know there are extremes upon both sides. They will talk about pedigree without regard to the animal. I don't want the pedigree without the animal with it.

J. W. Robe. I would like to have a pedigree with mine. I was at a sale last fall where there were some fine cows sold. To look at them, you would think they were poor scrubs. One of those cows sold for a high price, yet she looked like a very inferior animal. I asked the purchaser why he bought her, and he for her pedigree; that she had a very fine one. This was an instance of pedigree backing up the animal.

Claude Matthews. I want an animal of sufficient excellence that he shall declare his thoroughbreeding in his appearance. I want them to be animals of unusual merit before I take them into my herd. Animals of superior breeding and excellence will always command the best price.

Mr. Marlott. My experience is, that the better animal your bull is from and better pedigree, the more money there is in breeding stock. If I was buying a bull for myself, I would rather give two or three hundred dollars for one that I knew his pedigree for two or three generations back, rather than to buy one just on his appearance.

S. R. Quick. I want a good pedigree. You may take a half breed of good individual merit probably, and as fine in appearance as your thoroughbred, still I wouldn't like to risk the breeding qualities, from the fact they will run back to the woods sometimes. I have seen it tested with marked results. I want a thoroughbred all the time, and I want one of good individual merit at the same time.

Governor Williams. I differ somewhat with the gentlemen that have preceded me. I think sometimes we have first rate men that don't come from royal families. I am inclined to judge from the appearance of an animal more than from pedigree. The butcher who buys your stock does not take pedigree into consideration. When I have a good fat steer, with meat all in the right place, good neck, straight back, etc., I can sell him for as much money as Mr. Thrasher can his, whether mine has a pedigree or not. We have been placing too much importance upon pedigree. My policy has been to get along with the least labor possible. If I undertook to hire men to cut straw and oats, mix and feed, I couldn't sell my cattle at the end of the year for enough to pay them, therefore, I contend that the best plan in Indiana is to sow all the blue grass you can get into the ground. Plow but little, and let your cattle help themselves. It is a good plan not only to wet your feed, as have been suggested, but to do it with boiling water. Boil your oats or corn, or whatever you throw into your feed. I have bought many bulls, but never asked whether they were thoroughbreds or not. I neither buy nor sell pedigrees.

Mr. Cooper. If we all disregarded pedigrees in the matter of raising stock, it would be but a short time until we would have no short-horns. The country would soon be stocked with narrow backed scrubs. I believe people would be worse imposed upon if there was no such thing as pedigree.

Mr. Marlatt. I want the pedigree to be a good one, but first I

want the animal to be good. It is necessary that we feed some rich food to our cattle a part of the year. I feed a little grain the latter half of the winter, almost every day. I hardly ever feed much after turning out upon grass, although I am satisfied it is some advantage to do so. One of the best milkers I ever saw had all the blue grass, timothy and clover she could eat. If the governor has raised fine stock without regard to pedigree and from cattle not highly bred he has succeeded better than any body else. I have studied this question much, and I have never found nor do I think any other man has, a fine set of steers but what could be traced back to a fine pedigree of cattle.

Gov. Williams. In case we should happen to neglect the pedigree of a bull and should raise a fine animal, it seems to me that ought to answer all purposes. We sometimes find among these pedigree animals some that are ill formed, with a horn you don't want—something wrong with the very best of them. If you see an animal with the best pedigree in the world that is not well formed, and another that is perfect in form but without any known pedigree, you would choose the latter in preference to the former, with his defects. Like begets like. I don't pretend to say you mustn't feed grain; I always feed grain but don't go to the trouble of cutting it up as nice as Mr. Thrasher does. Let your stock eat straw and get along the best they can. I know they nose a great deal. In winter when the grass is too short for the cows I let them have hay. I don't raise my cattle entirely upon grass, but wish I could.

W. W. Thrasher. Half of the farmers in this State haven't got sense enough to make a living upon a farm. They will break up all grass land and run it to corn. They don't know anything but raising corn and hogs. Suppose they let that plowing alone and put in grass which they can use in winter in the place of feeding grain. If stock have any pasture it is generally a little lot where the farmer has turned in his work horses and without grass sufficient to keep a goose. That is the practice of at least half the farmers in this State. The masses of our people that know nothing about pedigree are damaged in consequence of pedigrees. Until we educate them up to the point of understanding pedigree they had better be without any knowledge of it. I don't care if we never had a pedigree, if the animal fills the bill, he is what we want. A pedigree animal generally is better than those without any pedigree. I don't want an animal without he has got a good pedigree, but I want a good individual animal along with that pedigree. When I used to show cattle, perhaps as successfully as anybody, I didn't have any of these gilt-edged cattle. I never owned any, was never able

to buy them and it was a good thing for me, for if I had I might not have had any home at this time. There are hundreds of men that haven't got a home to-day, unless they smuggled it, by reason of buying gilt-edged pedigree and no animal with it. The masses had better rely upon their own judgment as to the merit of an animal, because, knowing nothing about pedigrees, they are dependent upon men who are sharpers in the business and get picked up. Cattle men are perhaps as honorable a set as any other profession, still some of them are liable to misrepresent to men who are not posted. The subject of pasturing can not be talked about too much. The people of this country certainly plow as much again as they ought to. They work up their places to feed hogs, and hogs are an uncertain business. It appears to me that farmers ought to practice mixed husbandry. It is certainly much easier for men and more profitable to have more pasture than they have now got. The older blue grass is, the better, and in Kentucky they buy it according to its age. I would rather buy every bit of grain for feeding than to have scant pasture. You can not buy grass, but you can grain and wheat, and frequently cheaper than you can raise it. Some farmers have pasture in woods that they can not use for any other purpose. That is not very good, but is better than nothing. You may travel from this county east and you will find scarcely a farm that has got a blue grass field upon it. There is once and a while a clover field. In Putnam and Hendricks counties they have some blue grass, but south and north and east you will find they have no blue grass.

J. W. Robe. Mr. Thrasher says that old pasture is the best. I expect it will be information to the convention to be informed why old fields are the best.

Mr. Thrasher. That is a thing that has never been explained to me, but in Kentucky that theory prevails, and blue grass is valuable in proportion to its age. Our blue grass pastures need underdraining as much as our plowed fields do. Drain your wet fields and cattle will pick grass in the low places before they will upon the high land.

J. P. Forsyth. I have noticed in yards where grass has been for a number of years, it would come up so thick that it wouldn't head out. Old pasture is preferable because it comes up thicker and affords more grass. In a new pasture grass grows very high but not thick.

J. W. Robe. I think the older pasture has a greater number and variety of grasses in it, and cattle are like human beings in this matter of variety. In a new field you don't find more than two or

three varieties of grass. Cattle fed upon woods grass are not fit for New York market, but if fed upon blue grass they are ready for the eastern market without being corn fed.

Thos. Wilhoit. Blue grass enriches the ground. The old pasture upon my place is nothing but blue grass. I sow clover, timothy and blue grass together; clover and timothy in time give way to blue grass but the latter gives way to nothing.

Mr. Cooper. That is my experience. I sowed clover, timothy and blue grass together, and the longer it lays the more blue grass it gets. It gets thicker all the time and keeps matting off at the head until it becomes sort of bunchy.

Mr. Marlatt. But few farmers have grass enough—especially in the winter season. I generally aim to keep half the land I have in grass.

J. P. Forsyth. My notion about blue grass is to pasture it off close in the spring, then take your stock off and let it grow up for winter use. Pasture it close until after the heading season; then use your clover and other pasture and save the blue grass for winter. I think a twenty acre lot pastured off close down until the first of June will produce more grass than sixty acres that is not pastured through the spring.

Thos. Nelson. Clover, I find, will do for young cattle to graze upon, but for beef I never want it. I have noticed in pastures grazed for twenty years a sprinkle here and there of white clover.

W. W. Thrasher White clover will lay upon fat more than any grass that ever grew. You may talk as much as you please about blue grass, but white cover can not be excelled by any. White clover will grow with blue grass some seasons. In the same pasture it will grow largely one season, and the next season it may entirely disappear. If you want winter pasture, graze it down to a goose pasture, and then withdraw the stock and let it grow. After all that has been said about blue grass, there is a while in August and September that it fails a little and don't furnish a full feed. An extreme drought injures it perhaps more than any other grass. I don't know of anything better to supply its place than a field of clover and timothy. White clover will not grow upon wet land.

Adjourned to 8:30 o'clock A. M.

SECOND DAY.

MAY 26, 1880.

The association met pursuant to adjournment, Thos. Nelson, president pro tem, presiding. The minutes of yesterday's session were read and approved, after which, Thomas Wilhoit, of Middletown, read the following essay:

AT WHAT AGE SHOULD WE COMMENCE USING YOUNG BULLS?

MR. PRESIDENT AND GENTLEMEN:—The animal should be at least two years old, and his breeding faculties well matured, before he is bred. He should be allowed to serve the cow but one time. If she does not stand then, she will not at subsequent times. If properly managed, a bull may be used without injury at one year old. Give him access to but few cows, let him serve them one time, but the times of service should not be too close together. At an older age, he will mature better and more vigorous calves.

DISCUSSION.

S. R. Quick. A majority of men use bulls at a great deal younger age than the paper recommends. I heard of a breeder who bred a young animal when he had to make a pit to put the cow in so that bull could cover her. I think a bull at the age of three or four years gets larger and more vigorous calves. If breeders, instead of selling their old bulls to the butcher, would exchange with one another, such an arrangement would mutually profit them, and would be far better than for each farmer to sell his bull and buy others at high prices.

Albert Marlatt. A few years ago I purchased a calf at Meredith's sale, two months old. It had been kept up well and I treated it well. I bought several cows afterwards and bred them to Meredith's bull. I took them up there and left them for some time. I paid for their keeping and was to pay fifty dollars for every calf I got. I had six cows, and found toward fall that they were not with calf. I concluded to breed them to the bull calf I had bought of Meredith and accordingly stood him to five cows and all of them got with calf. I don't think he served either of them more than one time.

I bred my bull when he was about eleven months old, and have been breeding him ever since. I think Mr. Wilhoit is right in the main, not to breed young bulls before they are two years old.

James Marlatt. I have had good success in breeding young bulls, commencing at about a year old, but I never aim to breed them to

many cows. My bulls never served half as many cows as some of my neighbors. I have known young bulls overbred from a year up that at four year old didn't get one-fifth of the cows they served with calf. I don't see why a short-horn bull should fail at five or six years of age, if properly managed. I bought a bull a few years ago a little past four years old. I kept him until he was nine years of age and I am satisfied he got fifty calves the last year I had him, and they were as good as any set of calves he ever got. I also know of a bull that did as good service at thirteen years of age as at three and four. We may breed our bulls young, but don't overbreed them. I don't believe there is any bull that need lose his usefulness under twelve or fifteen years. There are very few of our good cows that run down much under twelve years. I would as soon risk a cow for breeding at twelve years old as at six. I have had them breed from sixteen to twenty,

Charles Miller. A bull has the same propensity to breed young that a heifer has. It would not hurt a young bull to serve a cow occasionally, but don't use him too much. Calves will not be as strong and vigorous where the bull is bred too young. There is great danger of using young bulls too much.

Thomas W. W. Sunman. Why is it that bulls when four or five years old, are turned off to the butcher on account of not breeding? Almost every breeder of short-horns does it.

Thomas Wilhoit. I think it is in the way they are managed. A young bull is easier spoiled than an older one. I can take a young bull and spoil him in three months, by letting him serve too frequently.

James Marlatt. I bought a bull some years ago for service. He was recommended as a sure breeder, and was in fine condition.

took him home, fed him well, and he got no exercise except what he got in being led to and from water. I bred him to my own and my neighbors' cows, but without satisfactory results. I weighed him at the end of several weeks, and found he had gained one hundred and forty pounds. During the first three months he didn't get more than a quarter of the cows with calf that he attended. I then turned him out with the stock cattle and let him run the fields. The next spring and summer I bred him, and he was just as sure as the average bull. He had failed before from the fact that he didn't get exercise enough. He was kept up too much and possibly fed too high.

J. W. Robe. I have a bull that I have been breeding three years. He served his first cow at eleven months. He was of good growth, and I think that year covered twenty-six cows. He has got as fine

calves as ever I saw. He has grown up to be a fine animal, and I always keep him up; he don't know what grass is. All the exercise he gets is being led to water once a day, and yet he has never failed. Last year my cows didn't get with calf the first heat. The bull I had before this one didn't do good service the first covering. It seems to me that we might profitably get up an exchange of bulls among breeders. I believe we can get equally as good calves by old bulls as by younger ones. I had a kind of a theory about this thing of bulls getting male or female calves, but this spring it was knocked in the head, and I believe this matter of sex is managed by a higher power and that man has nothing to do with it.

Albert Marlatt. I noticed regarding my bull that of the first ten calves that came eight were heifers, and since that nearly two-thirds of the calves have been heifer calves. I can not account for it in any way.

Thomas W. W. Sunman. Some of my neighbors tried a Jersey bull that was said to be sure. He was bred as high as five times to some, and of the one hundred cows I expect there were twenty that aborted their calves. It was in the spring of the year that the abortion happened from some cause.

W. W. Thrasher. I don't think there is any good argument why a bull should not be used at an earlier age than two years. A bull from one to two years old will get more and as good calves as at any other age, and he is more sure then than at any other time of his life. In Kentucky the best breeders will hardly buy a bull calf at all. They generally buy a bull that has been tried and something is known of his breeding qualities. It is the reverse in this country. There is no reason (unless you have too many) for selling a bull until he is ten or twelve years old, if he has been properly kept. It has been thought by some that the keeping of the animal has nothing to do with its breeding qualities. I think differently. Take these pennyroyal bulls—they never fail; they go to a cow as often as she will let them; they breed as long as they live. They are generally not cared for much, but just let run. I am satisfied that a bull, to be of good service, should not be overfed. I desire thorough breeding qualities, not only in the bull but in the cow. You can not tell anything about a bull's breeding qualities until his stock matures. For that reason, breeders in Kentucky prefer old to young bulls. Last year I had a bull so fat at three years of age that, when turned in with cows, he would stand around half a day before making any advances, and then the result was uncertain. I don't see how it is that men can have breeding bulls and have them

fat. A cow that is fat will breed a little better than a fat bull, but still it injures them and their milking qualities.

In the absence of Robert Mitchell, the subject assigned him for an essay, "Is it important to have experts as committeemen to pass on short-horns at our Fair?" was discussed.

DISCUSSION.

W. W. Thrasher. My experience in every department of society is that a man who knows nothing about a subject had better let it alone. Some years ago, at our State Fair, three or four cows were brought into the ring, and among them I had two. The judges put the ribbon upon a cow that the owner told them he didn't want—that he was not entitled to it and for them to take it off. They didn't take it off, and afterward I saw one of the committee and asked him if he knew much about fat cattle. He said he didn't know whether he did or not, and I said that is what I thought. I further told him that if a man was a judge of an article he knew it, and if he was not a judge he is no gentleman if he serves upon a committee. We mean by experts men that understand the business they are expected to pass upon. I am satisfied that our State Board of Agriculture would do well to send off for men of high reputation, such as would decide upon the merits of an animal, and know what they were doing. At Fort Wayne they have an excellent show every year; they correspond with men at a distance that can not have any possible interest in any way—men they know to be honorable and competent. Their expenses are paid, and generally such men will attend. Here, our people gather up whoever happen to be in sight at the time—perhaps they are qualified and perhaps they are not—oftener disqualified than otherwise. Some people are influenced by the premium they see upon a certain animal, supposing it to be the best animal upon the ground. Such are sought after by persons incapable of judging for themselves, and they are likely to be misled. We should have experts in all departments—cattle, hogs, sheep, etc.—and they should be obtained at almost any cost.

Daniel Cox. I think we ought to have experts in every department. Wool men to pass upon the best grades of wool; the same in regard to beef.

T. W. Sunman. I don't believe in selecting butchers as committeemen to pass on short-horns. A gentleman wrote me that the greatest injustice had been done him by a committee composed exclusively of butchers, in their decision regarding some stock on exhibition. On one occasion he showed for the best four-year old bull, and as the breed was not specified they let in a little narrow-

back Jersey, which beat his short-horn. He also showed for sweepstakes and was beaten again.

Wm. Crim. As members of the State Board of Agriculture, it was delegated us to select committeemen to pass upon the merits of stock, award premiums, etc. The members aimed to select the best men they knew for judges, but as a great many of the men appointed failed to appear, we had to select men who happened to be on the ground at the time. In this way inexperienced men frequently serve as committeemen. This is hard to obviate, unless the short-horn breeders of the State select their own committeemen and the State Board appoint whoever they agree upon. It is an imposition upon exhibitors to have incompetent men pass upon their stock. In the matter of sheep, hogs and cattle, if the men representing these interests would agree upon committeemen, the State Board would confirm their recommendations, and in this way the men that go to the Fair with the best stock will have justice done them.

J. P. Forsyth. I would be little afraid to adopt the plan just suggested, and believe the system that has been followed for the last two years can not be improved upon. The plan outlined by Mr. Thrasher is tolerable fair, but it wouldn't do to carry it too far. You send to Kentucky and get your experts, and they won't give any thing a premium unless it runs in the Bates family; the same regarding admirers of the Jersey family. The Board should select men familiar with the department they are serving in, and when their time is out discharge and pay them off. Don't aim to run one man through on everything. I have served upon committees with Messrs. Mutz and Quick, and I know that in making our selections after an examination we very often voted for the same animal without a bit of trouble.

A gentleman from Illinois brought some hogs here to the Fair, and after selling out he came to me and said he had been solicited to act upon a short-horn committee for sweepstakes, admitting that he couldn't tell a point belonging to such stock, further than they look nice. He asked my advice about serving and I told him to ascertain who were the other judges, and that if they were competent he might serve; if not, for him to stand aside—that where there were two competent judges he could stand by and keep still, and the other two would decide without finding out that he was a fool. He thanked me, said the other two were excellent judges and accordingly accepted his appointment. Exhibitors dread the show at Lafayette, because they are in the habit there of putting only generals and colonels on committees and it is not worth while to exhibit there unless you are related to Gen. Grant or one of the

judges. They pay for the services of judges, but have no one but relatives to fill the places.

Thomas Wilhoit. No man is a good judge of an animal unless he has handled or bred them. We need men that are judges of an article to select judges to pass upon the same. Machinists should select judges on machinery, cattle men committees on cattle, sheepmen committees on sheep, etc.

W. W. Thrasher. The breeder of short-horns feels himself much safer should the owner of a herd upon the ground act as a judge upon his exhibit, rather than for an incompetent man to do so. If there is any honor in such a man he is not going to put the ribbon where it does not belong. He knows men are watching him, and knows every step he takes; hence I would rather submit my case to a man that is showing in the ring, and ninety-nine times out of a hundred I would get better satisfaction than to take a man unacquainted with the business. Exhibitors can not pick out a committee that will be satisfactory to all. I have had them come to me and agree that I should serve upon a committee. I said no. You will not be satisfied and it will be doing the society an injury. I said there were cattle there that I had sold and I might put the ribbon upon them or I might not, but if I did I would injure your society in passing upon my own animals. It won't do for this society to select committeemen, because there would be more or less jealousy among exhibitors and I prefer letting the selection rest with the State Board where it belongs.

J. P. Forsyth. A man may not be dishonest, but whenever he tells me he can put aside self interest I don't think he understands himself.

Chas. Miller. It seems to me that since the State Board has been appointed by the society to select these committees, and are responsible for the work done, the selection should be left with them. I agree that the committeemen should be experts in their business. To sum up the whole thing, it seems to me, it would be best for the short-horn men and State Board to co-operate together, and, if the Board don't understand about short-horns and competent judges, give them all the information you can, and then let the Board make the selection.

Thomas Nelson. I was a member of the State Board a few years ago, and this question of the selection of committeemen that were experts, was always a troublesome one. On three different occasions, while I was a member, it fell to my lot to select committeemen on cattle, and I always selected men that were not exhibitors. and that had always been raised with cattle. If this Board should

select this committee, and should take them from Kentucky, it would be as Mr. Forsyth said, you couldn't bring an animal here that had a drop of "17" blood in him, and get a premium. Last year it was the unanimous opinion of the committee with which I served, that the bull we gave the premium to was rightly entitled to it. I wouldn't have bred to that bull, knowing his pedigree, nearly so soon as to some others that were there, and didn't get the ribbons. I knew the premium bull had "17" blood in him. I wasn't supposed to know anything about his pedigree. It happened that I did. The way I have been educated and grown up to view animals, the premium bull had the preference over all. He was in the prime of age for showing.

J. P. Forsyth. When cows were showing last fall, there was a gentleman exhibiting with two or three other lots of fine cattle, and he had the impudence to call me aside while I was acting, and said, "do you know that lot of cows there has 17 blood in them." I said, no, sir; that that has nothing to do in this case. I am here to pass upon the merits of the animal.

In the absence of Col. C. B. Jackson, the subject assigned him, for an essay "at what age should we sell our steers to be the most profitable to the breeder," was discussed.

DISCUSSION.

Albert Marlatt. Previous to 1874, for ten years, I handled about a car load of steers a year. One lot I kept until part were three years old and past, and a couple four years old and past. One of the steers I paid \$108 for at two years old, kept him eighteen months, and sold him for \$170. There was one steer in that lot I bought at two years past for \$76, and sold him among a lot that averaged me \$165 and some few cents. They were three years old past, except two that were four years old. The two four year olds, the last two years, gained respectively one hundred and fifty and three hundred pounds, and the two year old gained six hundred during the last year. I bought a lot of yearling steers; engaged them in the winter, and received them in June. I took them at six cents a pound, and they cost me \$65 apiece. I kept them out that summer, wintered them, and late the next fall sold them at about \$70 a head. While I was buying these, I passed a man with a nice calf, and asked him what he would take for it at six months old. He said so much a pound, and I took it at \$42.50. I kept him eighteen months, and sold him for \$63. More recently I fattened a car load of steers, paying for some of them \$50 a head at yearlings, and for others a little more. I have paid as high as \$80 and \$90 for two year olds to feed. I generally sell about the middle of June, after

they were three years old. They brought me from \$125 to \$140 apiece.

W. W. Thrasher. I am satisfied from experience, and from what I learn from others, that to sell steers young is the most profitable. You can get a steer calf up to seven hundred pounds without missing what he eats, but the next ten hundred pounds you put upon him costs you some money. It is just so with hogs. You can get a pig up to a hundred pounds and hardly know it, but from that on he goes into the crib pretty deep. The growth of cattle up to ten or twelve hundred pounds is so rapid and cheap that no man can afford to keep them profitably after that time. The man who pays \$60 per head for steers, I don't care how long he keeps them, he will never make as much money on them as the man did of whom he bought. A young animal, one and a half years, makes better beef than when six or seven years old. We must have our cattle ready for sale when ever we get a good offer for them, if they are only a year old. If we have cattle that we can mature, and we should have them, the demand is such that we can not afford to keep them several years.

J. P. Forsyth. I used to keep my stock until they matured, but in this fast day and age the fashion has changed, and I sell my hogs twice a year. I try to keep them until they get six months old. We can make the first thousand pounds of a steer with one-half the feed we can the next five hundred, and with less trouble. To keep a steer until he is three years old, I never was able to get any profit out of him. Hogs are profitable if sold at five or six months old, but not so if kept eighteen months—besides they are more liable to disease if kept long.

Thomas Wilhoit. Take a yearling steer, at fifteen months it ought to weigh a thousand pounds. You sell him at that figure, then you have to pay a big price for yearlings, and good yearling steers are not easily picked up over this country. I can take a yearling steer and put four or five hundred a year upon him, and then I am going to add something to the price per pound at the same time. It will pay me to feed that steer until he is three years old, and then he will prove a profitable investment.

Daniel Cox. I want to see my steers in the fall after they are two years old. It is evident to an observing man that there is an advance in price at that age. I will sell mine at two and a half years old and let others feed them for the English market. The purchaser may get more money but he has the work to do. I want to sell my hogs when they weigh from one hundred and fifty to two hundred pounds.

James Marlatt. I am in favor of keeping steers until they are three years old, or not to exceed three and a half. We must have steers, and a man can raise them cheaper than he can buy first-class ones. We can afford to feed our steers until they are a little over three years old, and by that time, if they are well treated, they ought to be ready to ship to England.

The following resolution, offered by T. W. W. Sunman, was adopted:

"That in the judgment of this Association, the best time to sell steers to be profitable to the breeder is at two and a half years old."

James Marlatt. For some years I have sold my steers at two and a half years of age, but if I had been able to treat and give them my personal attention I would have made money by keeping them six or eight months longer.

Thomas Nelson. I will take Mr. Cox's steers at two and a half years and keep them one more year. I take it that your farm will keep better by feeding matured cattle rather than young cattle upon it. I would rather Mr. Cox would raise the bone and I would take the bone and put flesh upon it.

Thomas Wilhoit. I will buy the steers he proposes to sell in the fall. That is the cheapest time they can be bought.

Thomas Nelson. I prefer to buy steers in September to any other month in the year. Then I have the fall to use my own grass for feeding them.

Daniel Cox. I would prefer to sell the last of October. I will sell my steers at two and a half years and let others feed them another year.

The association discussed the subject: "Does color have anything to do with short-horns as beef animals? If so, why?"

W. W. Thrasher. This color question is of great importance to cattle breeders, and perhaps it is less understood among cattle men than any one merit of the short-horn race. That color has something to do with the beef qualities of an animal is not questioned among experts. There is no other cattle that, as a breed, make as good beef as do the short-horns and their immediate descendants. There is some reason for this. We sometimes hear a man speak of the handling qualities of an animal. Very few men understand what that means. What we mean by handling qualities is this: When you put your hand upon an animal he should feel as soft as a pillow to be a first-class animal; otherwise he is not first-class for beef purposes. An animal that is soft and mellow to the touch will be juicy sweet and tender, the very article we desire to have; while

the animal that is hard to the touch is not fit for white or black men to eat. It is only fit to put strychnine upon and feed to sheep-killing dogs. In the soft handling animal the lean and fat will be evenly distributed, while in the hard handling it is not so much so. Soft handlers are universally good feeders and milkers. In red animals this soft handling quality does not predominate by any means. There are few red animals that are number one handlers. I have seen such among red animals, but not so frequently as among white or roans. There are more white animals that are good handlers than of any other color. The roan comes next and the red is the last possessing the fine qualities that make up a good beef animal, such as is sought for by the European market. You may blind an expert and put him among a lot of steers and he will pick out the good ones every time, simply by the handling process. These good handlers are always yellow skinned. Any black about the nose or horns is objectionable.

S. F. Lockridge. I have often tried to understand the prejudice that exists in this country against light-colored animals. It does not exist in England, the original home of the short-horns, nor to any great extent in the colonies; but here in the United States we find that prejudice, more especially in the western States. I find great difficulty in selling roan bull calves. I don't care how fine the quality of a white animal is, if there be a red one of inferior quality, the latter will be chosen first. I have asked buyers why that is so, but they can not tell. Last fall I sold to an eastern man, who slaughters a thousand a week for shipment to Europe, and I asked him, as a practical butcher, if he could see any difference in regard to color, whether a red animal was any better than a roan or white one. He said he paid no attention to that subject, but if there was any difference, it was in favor of the roan, as being the best handlers. If you examine the early herd book, you will find that all the celebrated animals were either roan or white. The father of short-horns was a red and white animal, and from the description, white predominated. Where you find a dark red animal, you are almost sure to find an animal with wiry hair, and, in that case, you find a hard handling animal. I have heard it stated that white animals won't stand cold climate. I heard that question answered by a gentleman, at a convention, by inquiring, "then, why was it the almighty put all the white animals in the far north?" They stand the winter just as well as any other. The skin of a thoroughbred white animal is thick and yellow. The skin of a white scrub is thin and blue; black nose.

Albert Marlatt. I have fed red, white and roan steers and recol-

lect that one of the best steers I had was a white short-horn with yellow skin. I have got a red bull in my herd of which there are few such in this country. He is a mahogany red, and about as soft as any of the white or roan ones. I have a number of red heifers; also some roan bull calves and they are good handlers. My experience is that fine feeding has a good deal to do with the qualities observed in different colored stock. I never feed oil cake—have never seen any. I feed nothing but cut oats, corn, bran, shorts and such as that. I feed nothing to make the hair extra soft, still my cattle feel very nice to the touch.

Thomas Nelson. I find no difference at all in color, provided the animal has the shape and right kind of hair. I admit that the lighter colors have preference over the dark ones. A dark red animal very rarely has this fine, mossy hair that distinguishes a good handler. Take a calf that has a smooth, slick hair which lays tight to its body, and you will very rarely have a fine fed animal out of that calf. I am speaking of the ungroomed animal. It is the hair and form of an animal that is the surest index at last of good qualities. These black horned short-horns are from Kentucky. I have one that dropped me a black nosed calf. The calf is a good feeder, with fine form, mossy hair and dark roan in color. I don't think fine feed has any effect upon the quality of an animal further than it puts him in good condition.

Mr. Lockridge offered the following, which was adopted:

Resolved, That the following resolution, passed by the late convention of the American Association of Breeders of Short-horns, at Lexington, Kentucky, embodies the views of this convention.

Resolved, That color in short-horns is simply a matter of taste, fancy and fashion, not affecting the quality of the meat, production of milk, or anything relating to the intrinsic value of the beast, and that public taste in preferring red as a color to the exclusion of other colors, is injurious to the short-horn interest."

REPORTS AND ELECTION OF OFFICERS.

The report of the Secretary was submitted as follows:

Expended for postage, printing and book..... \$3 20
For which I ask an allowance. T. W. W. SUNMAN.

Adopted.

The report of the Treasurer, W. W. Thrasher, was as follows:

Cash on hand May 25, 1880.....	\$54 50
Received from members at this meeting.....	8 00
Total.....	<hr/> \$57 50
Paid to reporter.....	\$12 00
Paid to T. W. W. Sunman, Secretary	3 20
Total expenditures.....	<hr/> 15 20
Cash on hand May 26, 1880.....	<hr/> \$42 80
Report received and adopted.	

An election of officers was had, with the following result: President, Thomas Nelson, Bloomingdale; Vice President, John W. Robe, Greencastle; Secretary, T. W. W. Sunman, Spades; Treasurer, W. W. Thrasher, Groves. Directors—J. P. Forsyth, Franklin; Thomas Wilhoit, Middleton; James Marlatt, Milton.

PROGRAMME FOR 1881.

The following programme for the next meeting of the association was presented and approved:

Essay—How were the short-horns developed to their present quality? W. W. Thrasher, Groves.

Essay—How can we tell an animal will make good, tender beef? H. C. Meredith, Cambridge.

Essay—What has color to do with the quality of beef, if anything? S. F. Lockridge, Greencastle.

Essay—Has there been any improvement on the short-horn within the past twenty-five years? J. W. Robe, Greencastle.

Essay—What varieties of food produce the most milk in the short-horn breed? James Marlatt, Milton.

Essay—What are the best grasses for the production of beef in Indiana? Robert Mitchel, Princeton.

RESOLUTIONS.

A resolution offered by W. W. Thrasher, changing the name of this association to "Cattle Breeders' Association," was, after discussion, laid upon the table for one year.

A resolution prevailed instructing the Secretary to procure reduced rates for members of this association on railroads centering at this point.

The following, offered by T. W. W. Sunman, was adopted:

WHEREAS, In the course of events, we learn with regret of the death of our former associate, Jacob Walker; therefore,

Resolved, That in his death this association has lost a valuable member and society a good citizen. That we deeply sympathize with the family of the deceased in their loss, and that the Secretary be requested to furnish them a copy of this resolution.

A resolution prevailed tendering the thanks of the association to Alex. Heron, Esq., Secretary of the State Board of Agriculture, for courtesies extended during the present meeting; after which the association adjourned *sine die*.

SWINE BREEDERS.

FIFTH ANNUAL MEETING.

JANUARY 5, 1881, 2 P. M.

The Indiana Swine Breeders' Association met at the Supreme Court rooms, Indianapolis (the rooms of the State Board of Agriculture being occupied), with Vice President T. W. W. Sunman in the chair. The minutes of the preceding meeting was read and approved.

The following address from President A. S. Gilmore was read by the Secretary:

PRESIDENT'S ADDRESS.

Gentlemen of the Indiana Swine Breeders' Association:

It becomes my duty—having been made so by custom of my predecessor in office—to address you upon the interests of this association. Experience, as well as observation, has demonstrated the fact that the formation and object of this association has been crowned with the best of results, and by our annual consultations in this department of husbandry, has not only been profitable to us as an organization, but its good effects have reached out, taking in not only our own State, but those adjoining, as the matters and things here discussed have found their way into a majority of our State papers.

It is a self-evident proposition that no department of husbandry is so profitable as that of swine raising, as capital can be turned much more readily and quickly than where it is invested in cattle, as the cost of the latter is at least three times that of the former.

The leading features of swine raising have been very much the same as during the past two years; prices have not materially changed, though there has been an upward tendency, and the average of the past year will be a fair basis for that of 1881.

The number of hogs packed will not vary much from the number packed during the previous year. From data taken from the

Cincinnati *Price Current* of December 16, I find from various places mentioned therein that a total of 3,340,000 have been packed, against 3,080,000 a year ago. And these places represent 83 per cent. of all last winter's packing in the West.

Hence, the conclusion, that we have not suffered from swine fever so largely as in previous years, and while individuals may feel that hog cholera is a great evil, and some may suffer a serious loss, is it not really a blessing in disguise? for if we had not "havoc and slaughter" among the "innocents," the prices of pork would certainly not pay for the time, labor and feed consumed.

But, seriously, do we not raise too many hogs?

Our exports have not been so large as in 1879. The falling off has not been such as to effect the prices, and the fact that so large a standing army as is employed in Europe—virtually doing no useful work—they must be kept at the expense of other classes, and we can safely rely upon a large consumption of our surplus from that source.

As to the matter of food for hogs, red clover for summer grazing is superior to anything else, and observation has shown that one acre of clover is worth more than three acres of wheat, and as much as two acres of corn and oats.

Artichokes for winter feeding, are a good substitute for red clover in summer, and hogs seem to do exceedingly well when thus fed in winter, as much so as when fed corn, especially stock hogs.

As to the diseases, prevention of the same, breeding, etc., I shall leave these matters to be discussed under the general programme.

Address by Wm. A. Macy, followed by discussion.

Mr. S. M. Sheppard, of Indianapolis, favored the association with a talk on "the value of pedigrees for swine." He said: "The practice of keeping a record is of a very remote origin. It was first applied to the horse, but as the advantages of a record became more fully realized it was used for other domestic animals until at present the record system has been extended to the 'feathered tribe.' Man's memory is treacherous; hence it is impossible for a man to remember the characteristics of the different animals that have been used as breeders, and unless a record of the animals, and their ancestors, are kept for reference, there will very likely be serious mistakes made in breeding that will take years to correct. Breeders and farmers should devote more time to keeping a record of their animals and different business transactions, and less time to physical labor."

After some discussion the association adjourned to 9 A. M., Jan. 6.

AGRICULTURAL ROOMS, JAN. 6, 9 A. M.

Association called to order, with President A. S. Gilmore in the chair.

On a motion of Mr. Jones a committee, consisting of Mr. Dragoo, Mr. Pegg and Mr. Macy, was appointed to confer with a similar committee of the Wool Growers' Association, also of the Dairyman's for the purpose of arranging time of meeting for the different associations, so as not to conflict with each other.

The Treasurer, James Mustard, not being present his report was deferred to next meeting.

On motion the association proceeded to the election of officers for the ensuing year. The present code of officers were retained as follows: President, A. S. Gilmore, Greensburg; Vice President, T. W. W. Sunman, Spades; Treasurer, James Mustard, Broad Ripple; Secretary, W. M. Wiley, New Augusta; Executive Committee, Nelson Pegg, Samuel Dragoo and T. M. Reveal.

The following resolutions was offered by Mr. Macy:

WHEREAS, The Swine Breeders of the State of Indiana acknowledge their high appreciation and valuable services during the last State Fair, of Demsey Seybold,

Resolved, That we, the Breeders, return our thanks for his services and kindness rendered during said Fair.

On motion the resolution was unanimously adopted.

On motion the treasurer was ordered to pay the expense of publishing programme and advertising the meeting.

The following was offered by Mr. Macy:

Resolved, That those who are appointed for public duty by the executive committee at any regular meeting shall be entitled to membership in the association for the coming year. Carried.

The committee appointed to arrange the time for meeting of the association so as not to conflict with the meetings of other associations, report that the annual meetings of the association shall be held on the first Tuesday after the first Monday in January of each year. The report was adopted.

The subject of "The most profitable mode of handling swine for market," was presented and discussed by several members present, as follows:

Mr. Jones said the best mode is in keeping your hogs ready for market at any time, and then sell them when there is a suitable market.

Mr. Reveal agreed with what had been said; the first hundred pounds cost less to produce than the second, and the second cost less than the third. The last pound of flesh put on the hog invariably cost the most.

Mr. Macy. There is quite a difference in raising swine for market and for breeding. If hogs are raised for pork exclusively, they should be pushed as rapidly as possible.

Mr. Drago. If pigs have the run of a good grass lot there will be no danger of over-feeding. The most profitable age to put hogs into market is at the earliest age they can be made marketable.

Mr. Craig. I have been feeding hogs for several years, and give my spring pigs plenty of grass and a variety of food through the summer, and fat them on corn in the fall.

Mr. Edwards. I think the most profit is in putting hogs on the market the first year of their life. I think it pays to give hogs swill once a day, and never give more feed than they will eat up clean. We can make cheaper pork by feeding while on grass rather than in cold weather.

Mr. Pegg. I turn my hogs intended for market on clover when in bloom, and let them run about two months and then fatten on corn.

On motion the association adjourned.

W. M. WILEY, *Secretary.*

STATE WOOL GROWERS' ASSOCIATION.

PROCEEDINGS OF MAY MEETING, 1880.

ROOMS OF STATE BOARD OF AGRICULTURE,
INDIANAPOLIS, WEDNESDAY, MAY 26, 1880.

The association met in semi-annual session, and was called to order by the president, Hon. Fielding Beeler, of Marion county. The secretary being absent, I. J. Farquahar, of Trenton, was appointed secretary *pro tem*.

The president submitted the following address:

PRESIDENT'S ADDRESS.

Gentlemen of the Indiana Wool Growers' Association:

It affords me much pleasure to meet you on this occasion. I feel assured that our coming together will be not only pleasant to us who are gathered here and profitable to ourselves and other wool growers, but to the people of the State, for we may properly liken the State to a family or community having a common interest and working together for the general good, and whether we will it or not, individual prosperity or adversity affects the interests of all.

We will be profited not by new and fine spun theories that may be advanced, or lengthy dissertations clothed in the garb of rounding periods or well rounded sentences, but by plain statements of practical men, of their every-day experience with their flocks, and benefited not only by their reports of their well deserved and earned success, but also from their failures. The skillful navigator keeps his eye not alone on the vessel that has preceded him and safely entered the harbor, but carefully scans all objects before and around him and carefully shuns the creaking mast and shattered hulk, for there he knows are the treacherous sands and rugged rock.

We will be profited, though we learn nothing that is new to us, in leaving, though but for a day, the cares of farm and flock, and

mingle in social converse. Without intending to disparage other callings or professions, I will say that the shepherd's calling is not only a useful but an honorable one. From the days of the patriarchs, through the dark and dreary ages of barbarism and semi-civilization to the brighter era of Christian civilization and enlightenment it has been so regarded.

The often maligned and belittled sheep, the emblem of purity and innocence, has been the source of supply of both food and raiment, and must continue so until science shall discover some hidden source of caloric to give warmth, or chemistry some combination to supply the health and strength-giving properties of mutton chops and roast lamb.

It has been said that he who causes two blades of grass to grow where only one grew before, is a benefactor of his country. If this be true, then he or they who succeed in producing two pounds of wool, or mutton, where but one was produced before, and with even a less, or at least no greater, amount of feed than was previously required to produce the one pound, should be awarded the highest of honors. That this is being done to-day, I believe that every observing sheep raiser, who is old enough to remember the style and quality of the sheep generally found in our State twenty years ago, and will compare them and their products with the sheep to be found on the farms of our careful and enterprising breeders of to-day, will bear witness.

I regret that my time, for the last few days, has been too much occupied to allow me to enter into any statistical examination or elaboration of this subject; but let a brief extract from a summary of the censuses of 1860 and 1870 suffice, and I hope it may be the means of calling the attention of others more capable than myself to fully elucidate this important subject.

According to the census of 1860, there was in the United States 22,471,275 sheep, producing 60,643,387 pounds of wool, being an average of 2 68-100 pounds per head.

The census for 1870, shows 28,477,954 sheep, 100,102,378 pounds of wool. Average per head, 3 52-100 pounds.

For the same years Indiana is credited in 1860 with 991,175 sheep, and 2,552,318 pounds of wool. Average per sheep, 2 57-100 pounds. In 1870, with 1,612,680 sheep, and 5,029,023 pounds of wool. Average per sheep, 3 12-100 pounds.

With such yields as here reported it is no wonder that the producers of such sheep should conclude that sheep-raising does not pay and abandon the business in disgust, or that the intelligent seeker for information on the subject should be deterred from em-

barking in the business. I believe there has never been any statistics taken or published of the weight of sheep, at least none in our country; but I have no doubt but that in the past, at least, they would have shown results equally insignificant as that of the production of wool. But how stands the matter to-day. Though the improvement in the last decade has been small, indeed, to what it should be, nor what we believe and hope it will be in the next, and I believe all of you, will be very much surprised if the census to be taken in the next few days does not show an average of at least five pounds. This is small, indeed, to what it should be, but would show at least a gratifying progress.

Mr. T. W. W. Sunman, of Ripley county, read a paper on "The establishment of a wool house for the disposition of the surplus wool."

The following topics were laid before the association, and discussed by Messrs. Darnell, Robe, McDaniels, Robertson, Dungan and Thrasher:

1. What is the most successful method of managing our flocks?
2. What cross is best adapted to make the most wool and the most mutton combined, and how to make it?

Mr. W. W. Thrasher, of Fayette county, read a paper on the question, "Are the ravages of dogs a sufficient reason for not raising sheep?" Said paper was as follows:

SHALL WE ABANDON RAISING SHEEP ON THE ACCOUNT OF THE DEPRE-
DATION OF THE DOGS?

Mr. President, and Gentlemen of this Wool Growers' Association:

To me has been committed the above subject. I say, *no*, to the question. If sheep breeding is profitable, as I think it is, keep on, do not stop because of the worthless curs on most of farms now in our State. You will find sheep, this mighty host, will demand protection, and will have it from sheeping killing dogs. Get the best pay you can for those killed, and go right on in the business. Give dogs strychnine, give them shot-gun, give them everything we can to exterminate them as much as possible. The man that keeps two or three worthless dogs, is of but little account himself; you will find them almost starved, ready for killing sheep. The owner's children starved, and neglected in the training for useful citizens.

Farmers sometimes make a failure in a wheat crop, or corn crop, or in hog crop. Do they quit the business on that account? Not quite, but still go ahead, and try again. We must expect to meet with losses all round, but if we wish to succeed in business, *stay* with it, and prevent losses as much as we can. But if they come,

meet them firmly, and try again. As we desire criticism on these papers, we close, and desire to hear from others. Thank you, gentlemen, for your patient attention.

The essay was discussed at some length by Messrs. J. P. Forsyth, S. W. Dungan, Clark and His Excellency, Gov. James D. Williams.

Mr. J. W. Robe offered for adoption the following resolution:

Resolved, That it is the sense of this convention that the Legislature pass a law to consolidate the township dog fund into a county fund, and it be held for that purpose only.

GOV. WILLIAMS.

J. W. ROBE.

W. W. THRASHER.

On motion, the resolution was referred to a special committee of three, appointed by the chair, with instructions to submit their report thereon at an early hour to-morrow. The committee consisted of Messrs. J. W. Robe, W. W. Thrasher and James D. Williams.

Mr. Dungan proposed for discussion the following query: "Had we better sell our wool at the present depressed prices, or hold it?" The discussion was opened by Mr. Dungan, who was followed by Messrs. Howland, Thrasher, McDaniels, Quick and Darnell.

Mr. John L. Thompson, of Arcana, read an essay entitled: "Experience and observation with all breeds of sheep."

After the reading of Mr. Thompson's essay, the following discussion took place:

S. W. Dungan. While the essay is an excellent one, it appears to me that there is a contradiction—at least an apparent contradiction. I take exceptions to what the gentleman says in his essay upon the point of coupling large males with small females, or a small female and a large male. [Mr. Thompson here remarked that the word used in the essay was "good-sized."] It does occur to me that the course he recommends is not right. I think we should always couple small males with large females. You may take it with other animals—horses, hogs and cattle, and you will find it so all the way through. I do not believe there is hardly a breeder here that will not agree with me.

Mr. Thompson. All nature is against Mr. Dungan's proposition. Look around you and what do you find in nature as to the relative size of males and females? The male is almost invariably the larger. It is even so in the human family. There may be exceptions, but that is the rule. The gentleman's view of this matter is the old view, that is now exploded and ignored among the best breeders of the country.

Mr. Dungan I refer the gentleman to Stewart on Sheep Hus-

bandry, as my authority on the point in question; and also to the Live Stock Journal, in which the same idea is advocated. Stewart's work is one of the best authorities on the subject of sheep husbandry extant.

Mr. Farquhar. I have been crossing sheep now for the last twenty years, and I invariably breed from the small female. One year I did the opposite and lost lambs from some of the very largest ewes in the flock. My theory used to be to breed from the smaller male and the larger female, but my experience is as I have stated.

Mr. Robe. We breed our small-sized mares to these very large Norman horses. This is one instance in which we go contrary to the gentleman's theory, if I understood him right. I understood him to say he would prefer to couple the Merino ewe and the Cotswold buck; am I correct in that?

The President. I so understand.

Mr. Thompson. That is correct. Take a Cotswold ram that will shear, say fifteen or sixteen pounds, and couple him with a common Merino ewe that shears eight pounds. Now, sixteen and eight make twenty-four. Divide that by two and you will have twelve pounds, with proper care, from the first cross. I have done that right along for years, and so can any other man with proper care. If my Merino ewe weighs eighty pounds and my Cotswold ram two hundred and twenty pounds, that makes three hundred pounds for the two sheep. Divide that equally, and you have a sheep weighing one hundred and fifty pounds—a good big sheep, and one that will bring the very highest price for mutton. That is my experience.

Mr. Dungan. Why would not the results be better if Mr. Thompson would take a Cotswold ewe that would furnish ten or twelve pounds of wool, and a Merino ram—one of our finest and purest-bred Merino rams—that would produce from fifteen to twenty-five pounds? That would produce more wool than he gets, according to his own figuring.

Mr. Thompson. I am talking about what is best for the farmer in general. Your Cotswold ram may cost you \$100. I take a ram that costs only \$25. The common farmer can not engage in raising that kind of sheep. There is a little more money invested in it than most of us have to spare.

Mr. Howland. I wish to ask Mr. Thompson what he would consider the best cross, or the best buck, rather, to run with a cross between a long-wool ewe and Shropshire?

Mr. Thompson. My experience in making that kind of crosses has been that the Shropshire in the beginning is a coarse enough

fiber. If you cross it with a Cotswold ewe your fibers are a little coarser. To cross that with the Shropshire it is a question whether you will not get a coarser kind of wool than our manufacturers want. I think we would have to mix in one-eighth to one-fourth of the Merino. A little of the Merino tells wonderfully in the compactness and, hence, in the shearing qualities of the wool.

Mr. Beeler. I ask Mr. Thompson if his fleece is uniform in quality in cross breeds?

Mr. Thompson. As I breed up I am getting my fleece more uniform and even in quality, and keeping it. That is a matter that will depend a great deal upon the purity of your ram and the uniformity of your ewes. I think out of the fifty ewes I spoke of I can select forty that are so much alike that you can not tell one from another. They had been bred for a long time in one channel. But if you buy your ewes hap-hazard, here and yonder, all over the country, your products will not be uniform. I think a farmer had better go to work and get his ewes uniform, and then he will know what to look for.

Mr. Howland. Would you cross the Southdown and Merino? I do not recollect what was stated on that point.

Mr. Thompson. I did not say anything on that subject in the essay; because I do not know anything about it.

Mr. McDonald. I have made the cross of the Merino and Southdown. It helps the Merino by bettering the shape of the animal over the rump. It thickens the wool, and sometimes to such an extent that you can hardly pass the shears into it. It looks a little more like a Southdown than it does like a Merino. The richest blood is in the Merino. The Merino will show one-sixteenth or one-eighth better than any other breed. I have almost entirely discarded Southdowns. I would like to ask Mr. Thompson whether he would use thoroughbred rams all the time, or whether he would also use a grade. [Mr. Thompson, from personal reasons, preferred that some other member should answer the question.]

Mr. Howland. Things have transpired yesterday and to-day that are to me at least gratifying. I am always after the true facts in every case. Occasionally, I have attended these meetings, but, then, instead of an earnest search after the facts, there were champions of Southdowns, champions of the Cotswold, champions of the Shropshire; not a man of them willing to admit that his favorite had any faults at all. I knew very well that they had. I found that I could not learn anything here. Each man appeared to be prejudiced in favor of his own flock that he was raising. But this time I am finding out what I want to know. If any particular breed has a fault or a failure in any particular direction, I want to know

that. I have believed all along that this long-wooled sheep is a good thing for us, if we keep a few of them together. I believe I have about come to this conclusion, however, that I should prefer the long-wool mixed with either a Shropshire or Southdown, as a mutton and wool sheep. I do not much like the Merino, but I may have to come to that. What we want in this country is a sheep that we can raise without having forty nurses for one little sheep. We want to raise sheep for the butcher. What we want to get at is, not what Mr. Dungan or Mr. Darnell can sell to their neighbors for breeding purposes, but what is best for the people to have to make wool and to make mutton for the world out of. We want a sheep that will produce meat to sell to the butcher; meat that any man can sell. Mr. Dungan alluded to some of the authorities. I tell you there is no authority in this case but the sheep itself. Forty years ago men had a great many hobbies, and rode them hard; they had a great many theories on all subjects; but now things have changed; circumstances are different to-day; we have more light on the subject. My opinion is, that this wool growing, sheep raising interest, like the cattle interest, is one that we can not engage in too extensively. And, in view of that fact, it is immaterial whether I or you spend a week or a month here every year, investigating this subject, and trying to find out what is best for us and our neighbors. You could not get anything like the amount of valuable information out of the Short-Horn Cattle Breeders' Convention here on yesterday, that you are able to get here, for the reason that that convention was *all* short-horn and nothing else.

Mr. Dungan. I am very much surprised to hear Mr. Howland talk about any such thing as forty nurses being necessary for each sheep of a certain kind, and to have him express the idea that that kind of sheep are so immensely tender that they can not get along. I have been handling Cotswold sheep for many years. I have found it necessary to put a large flock of them together. I have from thirty to fifty in a flock. As I said on yesterday, if a man has one hundred and sixty acres of land at his command, he can put them into different fields if he thinks proper to do so; but I do not take such extra pains with my sheep. I do not get up in the dead silent hours of the night to see whether one of my ewes is lambing. My lambs get up and go as soon as they come. I do not go to any more trouble with Cotswold sheep to-day, than I took fifteen years ago, when I raised graded Southdowns and other graded stock. I do not house my sheep. If you will take good care of them, I can guarantee that you need have no fear of their becoming diseased so readily. I have lost some sheep, as a matter of course — always

expect that, with any breed. Now, I wish you to understand that I am not in favor, exclusively, of one breed, and nothing else; I want to encourage every man in breeding every kind of sheep. I am glad to know that Mr. Thompson is experimenting in the way that he is with different breeds. It is necessary for me to do as I am doing, as well as he, in order that we may be able to supply the people with pure breeding animals. And in view of this fact, I confess that I do not like for men to get up here and talk as though out of a large flock of a given kind of sheep you could not get more than eight or ten that would not be diseased. That is not my experience. I have a farm situated tolerably high, and well adapted to the purposes of sheep husbandry; and that may be the cause of my long-wooled sheep being unusually healthy. I do not believe any kind of sheep will do well on low, wet, undrained land.

This other topic I would like to hear discussed a little further; that is, in regard to the results of the coupling of very large males and small females.

Mr. Thompson. I see that Mr. Dungan is still inclined to stretch my language a little. As I stated before, the words I employed were not "very large" males, but males of "good size." That is the term I used.

Mr. Howland. I wish to say this, that if Mr. Dungan, as I understood him to state, will not get up in the night and go out to attend to his sheep, he is not doing his duty, and I hope none of the members of the association will follow his example in that respect.

The President announced that the committee on classification for premiums on different grades of sheep was not yet ready to report, and suggested that as there appeared to be no other business, the time might be spent profitably in a general discussion upon sheep husbandry.

Mr. Pierson. There has been a great deal said in regard to the effects and consequences of keeping the Cotswolds in large flocks. That, however, will not affect me at all, and that, therefore, will not be my theme on this occasion. I am keeping a few pure Cotswold sheep. I am glad to see the interest and spirit that has been manifested here in regard to the qualities of the different kinds of sheep, the different grades and the crosses that have been made. I hope that a larger number of our wool-growers may find it to their interest to pursue a similar course, and that they may be very successful under that arrangement. I shall, for myself, continue to work right straight along down to the purest Cotswold possible, never expecting my flock to attain to so large a size as to be unhealthy on my farm. I am keeping fifty head. I have not been troubled any with the scours; I have been rather fortunate about

that; my sheep are exceedingly healthy. I was talking with a gentleman the other day, here on the street, who is a very extensive farmer, and I said to him, speaking about how my sheep were getting along, "I have this season thirty-two lambs, and seven out of the thirty-two are ewe lambs." Said he: "Well, sir; that is enough. That is one evidence of the thrift and hardiness of the sheep that my father always looked at—that the lambs should be two-thirds more males than females." He said, "that was always an indication that the stock were in an excellent condition—an excellent state of health—any kind of stock."

Now, I want to talk a little about the matter of breeding to large bucks. My buck weighs probably from 190 to 200 pounds. He is from Weston's imported English buck; and a very fine specimen he is. I think I have now a stronger and as lively a lot of lambs as I ever have had. They grow right along. My ewes are all in good condition. I did not put them onto young clover, but kept the rack full of clean, fresh hay for them all the time, where they could reach right up and get it whenever they please. I have not had a single case of the scours in sheep. My sheep have been clean almost all the way through. I have had no clipping to do, except a little I did on some of the ewes, for the convenience of their lambs. I have three lambs that came on the 16th, 21st and 22d of this month. They are from Kentucky yearling ewes; and to my great surprise, those lambs, within fifteen minutes of the time they came into the world were hunting for the teat, and ready to make their living. They are growing and doing excellently well, I must say, even though I do not approve of such late breeding. My lambs commenced coming on the 22d of March, and came on down along till the 22d of May. I have thirty-two, and have lost but one; and that was a lamb that bled to death. There was, however, one ewe that had two lambs and one of them still born. So, I may say that with Cotswold sheep I have had good luck as a general thing. My sheep are not exceedingly large; some of my ewes weighs 200 pounds, and one of the last wethers I sold weighed 220 pounds. I hope to hear from other members, and hope they will give us as full a description of their flocks as possible. I omitted to state anything as to my wool product. Out of the forty-five that I sheared the average weight of wool was 10½ pounds. Twenty-six of them made 12½ pounds apiece.

Mr. Thompson. I have read some in regard to the question of whether it is possible to control sex in the breeding of animals. I have seen several theories advanced, and have tried to test some of them; and the result was, as is the case when you come to test a good many other things that you find in books, that they all went

to naught. In one of the older countries, according to Stewart, the theory was to take young vigorous ewes and breed them to young, vigorous rams, and that under those circumstances nature would tend more strongly towards reproduction and multiplication than under less favorable circumstances, so that the breeder might look for a larger proportion of ewe lambs, and that, on the other hand, where older ewes were bred there would be a larger proportion of male lambs than of females. This was the theory; but in my own experience I have been unable to find any evidence to carry it out. Sometimes things have occurred that led me to think there was something in it, but the very next time the result would be exactly opposite. Some five years ago, when I began to breed Shropshires, my ewes were young and in good condition, and the rams were also in good condition. I wanted to give them the best chance possible, and bred them on the serving system, letting one in at a time. The rams that got the first twelve or fifteen lambs, with one or possibly two exceptions, were young, and the lambs were mostly males. In fact, I may say, it has been my observation, generally, that if the ram was vigorous a majority of the first lambs were bucks; but, after the rams had run with the flock for a week or two, I would get more ewe lambs than males. That would be while the ram was in a less vigorous condition than at first. Then, again, towards the end of the season, I would get more buck lambs. That has been my experience.

Mr. Howland. What age buck do you prefer?

Mr. Thompson. That depends on how he is used. I like an old buck, if he has not been run to death. If I wanted a Merino I would get a two-year-old, and for a Shropshire a yearling. In order to get the full benefit of him I would use him sparingly the first season; and then I would expect him to serve me well until he was six or eight years old. If some other man had used him, however, I would not know anything about what to expect from him.

Mr. Howland. How many ewes do you think proper to put to one buck.

Mr. Thompson. I think a good Shropshire ram, a year old, or past, if he is not used too strong in the outset will serve thirty or forty ewes. If there are, say five or six ewes, turned in with him he will serve them all, one right after the other, before he stops; and that is very apt to break him down in the beginning. I think a strong, vigorous ram ought to serve forty ewes the fall after he is a year old, and the next year do a good deal better. I have rams that we are using that are six years old, and I have the best lambs I ever had, from those same rams.

Mr. Quick. I agree with Mr. Thompson, that how many ewes a

buck will serve depends on how he is used. I have known a buck to serve sixty ewes a season and be successful in getting them nearly all with lamb, and lambs that were good and strong and turned out well. Of course he was well taken care of. If you turn the buck loose among the ewes I think twenty-five ewes is enough. Then, too, it is likely that your lambs will come scattering—more so than they would if the ewes were served in order as you let them to him. It is a little troublesome, to be sure, to take care of a buck as I think he should be taken care of, but I think it pays, especially in the raising of good sheep.

On motion, it was resolved that the president appoint a committee of three members, whose duty it shall be to examine and report upon samples of wool and award the premiums therefor.

Adjourned.

SECOND DAY.

THURSDAY, MAY 27, 1880.

The association met pursuant to adjournment, the president in the chair.

Mr. Dungan moved that a committee of three be appointed by the chair, to arrange a programme for the January meeting of 1881, and that it be made the duty of said committee to select topics to be considered and assign the same to such members of the association as they may select.

The motion prevailed, and the chair appointed as such committee Messrs. Dungan, Howland and Robe.

Mr. Farquhar moved that the secretary be instructed to secure reduced fare on all the railroads of the State, so far practicable, for members of the association, going to and returning from its meetings. Carried.

Mr. Darnell moved to reconsider the resolution adopted on yesterday, whereby the president was directed to appoint a special committee on samples of wool and award of premiums, out of the membership of the association. The motion to reconsider prevailed, and the chair announced that the question would be on adopting the resolution.

Mr. Darnell moved to amend the resolution so as to read two woolen manufacturers and one member of the association. The amendment prevailed, and the resolution thus amended was adopted.

The names of Messrs. William Merritt and Isaac N. Thalman, of Indianapolis, were mentioned and agreed to by common consent,

and Mr. H. Haverstick was added to committee from the membership of the association.

On motion of Mr. Pearson, Mr. Darnell was appointed a committee to notify Messrs. Merritt and Thalman of their selection, and request their presence.

The special committee on programme for January meeting of 1881, submitted the following list of topics, with the names of members to whom the same were assigned:

1. Diseases of sheep and their remedies. Dr. J. N. Navin, Indianapolis.

2. Should sheep be fed grain during winter, and if so what is best adapted to the production of both wool and mutton? I. J. Farquhar, Trenton.

3. Influence of sheep husbandry on life and character. Lee McDaniels, Rushville, Indiana.

4. At what age is it the most profitable to sell our sheep? C. A. Howland, Indianapolis.

5. When and how to shear sheep. John L. Thompson, Arcana.

6. How shall we breed and manage a flock of common or grade sheep for the greatest profits? Jacob Farquhar, Trenton.

The report was concurred in.

Mr. Pearson called the attention of the association to the fact that at the meeting of 1878 a committee was appointed to draft a bill in relation to the protection of sheep from dogs, and present the same to the Legislature. Said committee had not reported their action as yet.

On motion, the said committee was requested to hand in their report.

Mr. Thompson. Mr. President: I was a member of that committee. We found that the preparation of the bill, presenting it to the Legislature and taking the necessary steps to secure its passage, involved a great deal of labor, and far more time than had been anticipated. There were legal questions involved, and question of justice and respect to the rights of other people besides wool-growers. Some of the members of the committee stated that they had other duties to perform which rendered it impossible for them to give their attention to the matter, and it was finally thrown upon the shoulders of myself, Mr. Heron and the secretary of the association, Mr. Sunman. I wrote out and submitted to the other active members of the committee a bill which they at first approved. I have the original draft of the bill here, and with the permission of the association will read it, and make some explanations.

[Here the gentleman read the document.]

I conferred with a number of members of the Legislature in

regard to this bill, and they pledged to it their hearty support; but before it went before the legislature a certain gentleman, without the consent or the knowledge of either myself or Mr. Sunman, took it upon himself to alter one section of that bill, and the consequence of that change was, that when it went before the Legislature it was in such a form that I could not have voted for it myself, and we got no law. There were things inserted in the bill that made it unconstitutional, as I discovered from the extracts that were published in the newspapers, and thus the thing was killed. The bill is lengthy, but I defy any man who looks over the whole ground and comprehends the situation to draft a bill that will get us rid of the dog in fewer words. You can not deprive a citizen of his property without due process of law. The matter must be carefully guarded right here. The neighbor's dog is not to be counted out. It would be unfair to protect the wool growers' sheep and give no protection to the neighbor's dog. The bill, as it went before the Legislature, declared the dog a nuisance, and that it might be killed with impunity whenever it was found out of the company of its owner. You never could get the Legislature to pass such an act as that. I would never vote for it. I have had dogs, and dogs that I thought as much of, to say the least, as I did of any sheep I ever had. The object of the association in securing legislation on this subject is to protect the sheep by getting us rid of worthless dogs, and I maintain that this bill would do that thing in less than five years, and that there would be a revenue sufficient to pay for all the losses from dogs and leave a surplus for the school fund.

This bill was agreed to by the committee, and it was resolved to lay it before the Legislature, and I did not know of any change in it, but supposed it was before that body in the form in which it was originally, until I discovered that it had been put into the objectionable shape which finally defeated it. Now you understand the situation. The bill received not only defeat, but ridicule, and I myself was made the object of criticism and censure from different sources, on the supposition that I had gotten up a bill so utterly worthless and absurd—a bill so obnoxious that nobody could support it.

Now, I understand it to be the interest of wool growers to have as heavy a tax placed upon the dog as possible. On the other hand I do not want to do my neighbor injustice by killing his dog without due process of law, neither can I do so with impunity, for whatever might be the action of a justice of the peace, there is no question at all, that were a case of the kind to be appealed to the higher courts, I would be found to be a wrong doer and have to pay the penalty. I believe that any man is legally warranted in killing

a dog when he finds him in the act of worrying his sheep; but if the dog escapes, and the man afterwards kills him, he is punishable for it. We want this matter worked out justly to all parties. There are not as many sheep in Indiana as there ought to be by 500,000 head, nor as many by 500,000 as there would be in five years if this bill was made a law. On the other hand, if this bill does not suit the members of the association I hope they will say so. I would also suggest that another committee be appointed to lay this subject before the next Legislature, and endeavor to secure such protection as we need at their hands. Farther than this, I do not know of anything further to report.

On motion of Mr. Darnell the bill read by Mr. Thompson was accepted as the report of the committee, and the committee discharged.

Mr. Darnell introduced Messrs. Merritt and Thalman, manufacturers of woolen goods, being the persons chosen to examine and report upon samples of wool. Mr. Merritt said:

Mr. President: I wish to say a few words in reference to samples of wool, as I understand we have been called in for the purpose of making a comparison by sample. I judge that you have here small samples from each fleece, and not the whole fleece. Now, no buyer willingly purchases a lot of wool upon the faith of such small samples. We frequently receive samples by mail, and unless we bid considerably below what we regard as a safe figure we do not buy on such samples. In consequence of this, our judgment upon the respective merits of your wool may not be very valuable; we would have to have the whole fleece before us in order to give an intelligent and useful award. However, we will do the best we can with these samples, trying to give you some hints that may be of value, even though we have not as fair an opportunity of judging as we should want if we were examining wool with a view to buying it. I will name another matter that has been brought to my mind by observation on various flocks of sheep that I have seen the wool from. I think that hereafter (and Mr. Thalman agrees with me in this), in offering any premium, or in discussing the merits of different flocks of sheep, reference should be had to the number of pounds of *scoured* wool shorn from the sheep, and not the gross quantity of wool as it comes from the sheep. There is great diversity, as you all know, in the amount of shrinkage on the wool from different lots of sheep, and this the manufacturer is compelled to take into consideration in buying. It is the *scoured* wool that he supposes he will get from the lot that determines the price he is willing to pay. The very large, heavy-weight fleeces, that all are now striving for, and which, within certain bounds, is the most

profitable kind of wool, should not be pushed to the extent of making them heavy by breeding for oil instead of wool; for it is the wool that has the value in it, while the oil is worthless. The advantage gained by the excess of oil is only temporary, being the same that the manufacturer gets by using "shoddy" in place of good wool. The less oil the better.

Mr. Thompson. Mr. Merritt remarked that oil was not a thing that we should breed for. Now, in breeding Merinos, we have to breed for oil, for without we have oil we will not get that fineness of fibre and strength of fibre that are of so great importance. Of course, we do not want to carry it that extreme point where we get gum in the fleece, but to breed so as to get a nice oil is not going too far.

Mr. Thalman. Of course, the natural oil that rises in the fleece, gives the wool strength and lustre, but gum in the wool is, of course, all wrong. Your committee wish, Mr. President, before we go out for the purpose of examining your specimens of wool, to know precisely what you want us to do. Of course, we can not determine what kind of wool is most profitable for the wool growers to raise. We can decide for you what wool is most desirable at the present time, and what will bring the most money to the pound, but we can not decide the number of pounds; that is out of our line. The largest amount of wool produced now is this long heavy Cotswold. Some of that has run into a hairy coarse wool. That is going to come down in price; in five years from this time it will be lower by from five to ten cents per pound. I am satisfied that it is to the interest of all wool growers to cross with the Merinos where they have this coarse quality of wool, and that cross, I think, will produce the kind of wool that will, in the future, bring the best price.

The President. I would ask Mr. Thalman if he would not regard the decline in price of this long wool, which has become a little too coarse, as possibly owing to the fact that it has come to be more abundant than it used to be?

Mr. Thalman. In all our sales to eastern parties we have found them rejecting that coarse wool as fit only for the coarsest fabrics. They uniformly select the fine fibre. There is no question that the value of the coarse wool has depreciated. If you can keep it long and have it fine of course that is so much the better.

The President. The longer the better, so that you keep the quality of fibre right?

Mr. Thalman. Exactly.

Mr. Merritt. I wish to state that my remarks were intended to apply only to that extreme where the breeding is for gum or oil

instead of wool. Of course the more *wool* there is in the fleece the better. There is another reason for the preference given to medium wool as against the long wool, besides the abundance of the long wool at the present time. Medium wool will always bear a better relative price than very long and coarse wool, for the reason that the former is a grade of wool that is not raised in any other country in the world; that no foreign wool can compete with, and a very desirable wool for the manufacturer. It is like our people, made up of all sorts of elements blended together—the result being the production, in the one case of an admirable race of people, and in the other an excellent quality of wool. [Laughter and applause.]

The committee then retired to examine samples of wool.

Mr. Thrasher, from a special committee, reported the following resolution:

Resolved, That it is the sense of this association that the Legislature pass a law to consolidate the township dog fund into a county fund, and that it be held for that purpose only.

Signed by Committee.

Mr. Thrasher. There was something more than that appended to this yesterday—something about authorizing constables to kill all dogs found within their townships that had not been given in. I can never get any bill through the Legislature with that on it. There are a great many persons who do not know anything about the dog tax at the present time. I did not know much about it myself till lately, when I examined the law. The law, as it now stands, taxes each male dog one dollar and each female two dollars. That amounts to a considerable sum of money in each township. Heretofore, and as the law now stands, the township that has no sheep killed at all in a given year does not use any portion of their dog fund that year. What becomes of the money? Why, on the 1st of January here comes around the Superintendent of Public Instruction and scoops it in—steals that money from the township that paid it in, and puts it into the general school fund. I said “steal;” that is the proper name for the proceeding, and I emphasize it. The money is diverted from the purpose for which it was raised. It was raised for the purpose of paying for the loss of sheep killed by dogs, and it is diverted to the school fund. We want to forestall that diversion by having the money put into a county fund, and paid out to cover all the losses on sheep killed by dogs anywhere in the county. You can pass that; but you get up a bill with three or four other things tacked on to it, and they will kill it sure. But take that proposition by itself, and appoint a committee, not of five nor of three, but a committee of one—a wide-awake, working, energetic man, and I believe that thing can be put through in such a shape as to be

of practical use to the sheep-raisers of this State. If we can get that, it is all we want.

Mr. McDaniel. I feel, in behalf of county school superintendents that the word "steal" is a little too strong, and we had better modify it a little. I agree with Mr. Thrasher that that is the right name for it; I will say that much, here "in the family."

Mr. Howland. The question of how to protect the sheep, and how to get rid of the dogs will, I fear, always be a vexed question; still it is a matter that could be easily regulated, if the men who compose our Legislature had sand enough in their character to put the proper measures through. The trouble is, that the average man in the country thinks more of the dog than he does of the sheep, and the Legislature knows it. Most of our representatives keep two or three dogs apiece, and they are of the degenerate race of "yaller dogs," too, for the most part. [Laughter.] There is a law in England that brings them "to time," but in this great and free country of ours such things do not take with most people. About one man in a dozen keeps sheep, and the man who does not keep sheep cares not a red cent for the man who does. A law whereby every man should be required to take out a license in order to keep a dog, and a law that would fine him if he kept a dog without such license would be of some value, if it could be enforced, but that you can not get through our Legislature, because so many men own dogs. There is not one man in three of those who own dogs that pays the dollar or the two dollars that the law assesses them with, but if a man knew he would be fined for keeping an unlicensed dog or bitch, and that if he did not pay the fine he would have to go to jail, then he would come up to the mark and pay for his license.

Mr. Thrasher. How are you going to collect the money when the man is not worth the amount of the fine.

Mr. Howland. He would have to go to jail or get rid of his dogs, and that is what we are after.

Mr. Thrasher. Yes, you put him in jail and let him stay there until his time runs out, and as soon as he gets out again he will burn your barn or throw down your fences and ruin your crops.

Mr. Hammond. He should not know who informed on him. There is a way of getting at it without making yourself known. In this city they have a law requiring every dog to be licensed. When an officer of the law sees a dog running about without a check showing the number of his license, he hunts up the owner, and if the dog is not licensed he is killed—the dog, I mean, not the owner. [Laughter.] Now, understand me, that I am not urging this upon you, and do not ask you to adopt it unless it is the thing you want;

neither am I opposing the other measures that have been advocated here. It seems to me, however, that the best thing we could have, and the thing we would be most likely to secure at the hands of the Legislature, would be a law requiring people who keep dogs, all over the State, to take out a license for each dog or bitch, and pay a fixed sum for such license, the same as is the case in cities. That would raise a fund that would pay for all the sheep killed, and there would not be near as many dogs, either. Mr. Thrasher's resolution, I think, is the next best thing; though there is one feature in it that would subject the bill to ridicule in the Legislature; and that is, that it proposes to hold the dog fund forever, even after all losses are paid, to the detriment of the educational interests of the State. It would be characterized as "taking the children's bread and giving it to the dogs." [Laughter.] They are apt to ridicule such things in the Legislature. I think, therefore, that there should be some qualification annexed to the proposition before it is just what we want. How big a fund will you want? How long will you hold it? What are you going to do with the surplus?

Mr. Darnell. Our township trustees never pay more than one-half the value of a sheep that has been killed.

Mr. Howland. Then we should have them required by law to pay the full value, and to give the party an opportunity to prove what the value was.

The President. There is a claim made generally now, that the trustees pay for a good many sheep that the dogs do not kill at all, and that they sometimes pay two or three prices. That is one of the things you hear. Madam Rumor tells that.

Mr. Howland. Yes, that is one of the things you hear.

The President. This very question of a dog law is one of the sand-bars that we now and then run afoul of, and it is one of the most troublesome things we have to meet. We all, perhaps, have our opinion as to what would be the best thing, but the question is What can we get? With some little experience in the Legislature, I am fully aware of the great opposition that anything of this sort meets there. There are men in every Legislature who go so far in their opposition as to advocate the repeal of the dog law we have now on the statute books. I have heard men say they were opposed to it, because it prevented men from keeping large packs of dogs to hunt foxes with. Men say the foxes catch and kill their lambs, particularly in the comparatively wild country lying in the southern part of the State, and that they could not raise sheep. I recollect one man, who came from a southern county, who made a point of getting in some proposition to modify the dog law every chance he

got, and who said that that was one of the things he had pledged himself before his people to do. There are a great many men who think the dog tax ought to be removed; and, upon the whole, my opinion is that we have got as good a dog law now as we are likely to get soon. Of course it is not what we would like to have, but if we can get even a small cracker, let us not refuse to take it because we can not get a loaf of bread. I happened to strike in the Indiana Farmer, this morning, a paragraph that gives just what you meet everywhere. Members of the Legislature, you know, think they must so act as to be popular with their constituents.

[Here the gentleman read the paragraph referred to.]

I read this to show you the feelings of some particular men on this subject. Probably, the man who wrote this is a candidate for the Legislature in his county, and he may go there. He does not sign his name to the article, but only his initials. He may, for anything we know to the contrary, intend to go before the people with this identical hobby. I think we had well say as little as possible about dog laws.

Mr. Thrasher. I want to answer the gentleman who spoke a while ago, and who stated that his law was a better thing than the one I have introduced, the substance of, in this resolution.

Mr. Howland. The gentleman misunderstood me. I did not say it was better; I was merely expressing my own views as an individual as to what was the best thing to be done.

Mr. Thrasher. There should undoubtedly be some distinction made as to the value of sheep killed by dogs. Some sheep are worth eight or ten dollars a head, and some are not worth more than two. They should be paid for, not at a fixed rate per head, of all sorts, all around, but according to their real money value. Now we can pay all that the sheep are worth if you get this fund consolidated into a county fund, and at the same time avoid offending these out-counties that raise dogs and raise no sheep. They will not know anything about it, nor care anything about it. Such a law as that you can get through, probably. Now, these men who keep dogs are voters, but I hold that a man who keeps three or four dogs is of very little account to the neighborhood, and had better be out of it; he is of no use to society. Now, if we can get this fund consolidated, and have the money properly distributed where the depredations upon sheep are committed, men can get a fair price for their sheep when they are killed. I believe that such a law as that can be gotten through the Legislature, but with the attachments that were on it yesterday, authorizing the killing of dogs, there will be something else killed before you get near the dog, and that will be the bill itself. There would be something else killed besides the

dog, too, if the law was passed in that shape. It would be your cow or your horse, or something else, that would suffer by way of retaliation for your killing the dog. These men who keep the dogs are not, in general, responsible. We must not trample too much on their rights. We must compromise the thing as best we can, and if we can not get all we want we should be glad to get something, even a little better than what we have now.

Mr. Thompson. My friends here are advocating some elegant ideas, but I can hardly approve of them, with all their elegance. Putting a man in jail is one thing, and getting rid of the dog is another. I would like to see how my friend would look going with his officer to arrest a citizen and put him in jail for not paying his dog tax. What we want is to get rid of the dog, and jailing the owner is not getting rid of the dog. To consolidate the funds in the manner proposed by the resolution of Mr. Thrasher will make the business cumbersome. Nobody can know so well how the thing is working in the different townships as the people who are right in each township—right on the ground. On the other hand, if everybody is required by law to get his dog licensed it is every citizen's right to know whether it is licensed or not. I have the assurance from the mouths of a dozen different members of the last Legislature that the bill I drew up would have passed, but for the unauthorized changes that were made in it. It would lessen the school tax. Hence, I say if there should prove to be a sufficient revenue from the dog tax alone to make all other school taxes unnecessary; so mote it be. We want this thing made effectual, and in order to make it effectual we want to reach the dog himself; we do not care about reaching the man or his family. Whenever you get rid of a dog you must do it through legal process. You are justifiable in killing a man's dog while in the act, but let him escape to his home, and then kill him, and you will soon find out that the owner of the dog has rights which the raiser of sheep is bound to respect. I have seen men paid for their sheep at least four times their value, and others at less than one-fourth of what they were worth. In this bill I have provided that sheep so killed shall be appraised at their fair value by disinterested parties. My friends are opposing this measure, some of them from the very fact that they have not read it. I respectfully ask for the judgment of the association upon the merits of the bill, as I originally drew it up. All I ask of you is either to approve it or to reject it.

Mr. Darnell. You say in that bill, do you not, that \$200 shall be left in the township treasury?

Mr. Thompson. That is the fact; yes, sir.

Mr. Darnell. How would that work where there are \$400 or \$500 worth of sheep killed in a township?

Mr. Thompson. It does not say, as you will see by reference to the language of the bill, that there shall always be \$200 in the treasury.

Mr. Howland. But after all how are you going to get rid of the dogs?

Mr. Thompson. One of the best points in the whole thing is right there—how to get rid of the dog? I will show you how that is to be done. [Mr. Thompson here read one of the sections in the proposed law.]

The chair announced that the question before the meeting was upon the adoption of the resolution reported by the special committee. Thereupon the resolution was adopted.

The committee on award of premiums on samples of wool exhibited, reported that they had made awards as follows:

On long wool—First premium, S. W. Dungan; second premium, C. F. Darnell.

On medium and fine wool—First premium, John L. Thompson; second premium, John L. Thompson.

The thanks of the association were tendered the committee.

Mr. I. J. Farquhar, in behalf of the Executive Committee, presented the following report on the "classification of the different breeds of sheep at our State and County Fairs."

Class A—Fine wool sheep: to include American, French and Spanish Merinos.

Class B—Long wool sheep: to include Cotswold, Lincolnshire and Leicester.

Class C—Medium wool sheep: Southdown, Oxforddown and Shropshire.

Class D—Crossbred sheep: to include the cross of two or more of the above thoroughbred sheep.

Rules—All exhibitors of sheep, except of lambs, are required to furnish the committee a certificate of the time and manner of shearing. All sheep must have been sheared close and smooth, not earlier than the 1st of April. They shall also furnish the committee a certificate stating the age of lambs. All rams of two years old and over, shall be judged as breeders by their get, of which there shall be at least two of each sex. Evidence will be required that ewes exhibited as breeders are not barren, and no award shall be made where there is unsoundness in breeding qualities. No premiums will be paid any exhibitor that refuses to comply with the above rules.

The report was concurred in.

There appearing no further business, the association then adjourned till the January session, 1881.

JANUARY MEETING, 1881.

The Indiana Wool Grower's Association met January 5, 1881, in semi-annual session, at the rooms of the State Board of Agriculture, at 1:30 P. M.

Owing to the temporary absence of the president and secretary, the vice president, D. H. Thompson, was called to the chair. J. W. Robe was made secretary *pro tem*.

As there was a confliction of meetings, there being three or four appointed at the same time and place, a committee was appointed to arrange the matter with the interested parties for future meetings, so that each association might have its day.

The joint committee appointed to consider the time of holding the meetings of the different industrial associations reported:

Wool Growers, Thursday, January 7, 1882; Swine Breeders, Tuesday and Wednesday, and the Dairymen, Friday, of the same week.

The following new members were then duly elected: Thomas Nelson, Bloomington; Greenberry Dobinspeck, Nora; J. Q. Prigg, Middletown; Wm. Smock, Acton; Dr. A. C. Stevenson, Greencastle; J. M. Woodruff, Minerva; Geo. W. Robinson, Guilford; E. J. Howland, Indianapolis; L. H. Moffitt, Mattsville, Hamilton county; L. S. Fitch, W. L. Schooley.

B. F. Mayer, Mount Morency, being called upon, then gave a report of his flock for 1880.

Sheep on hand, 26—Cotswold.

Dr.

Twenty-six sheep at \$10 per head.....	\$260 00
Cost of keeping, \$2.00 per head.....	52 00
Total debit.....	\$312 00

Cr.

By 245 pounds of wool, at 35 cents.....	\$ 85 75
Sixteen sheep sold.....	247 00
Premiums at fairs.....	61 00
Sheep on hand, 26.	260 00
Total credit.....	\$653 75

Deducting debit from credit, leaves \$341.75 as total profit. Average profit, per head, \$13.14; average per cent. profit, 1.09.

"Should sheep be fed grain during the winter? If so, what is best adapted to the production of both wool and mutton?" was then discussed, the essayist being sick.

Mr. Dungan. I invariably feed plenty of grain, mostly corn. During winter, I feed from one-half to two ears per sheep per day. If I feed oats, or ground stuff, I always mix it with shelled corn.

Mr. Howland. I would not feed much corn unless sheep could get plenty of grass. Think it too binding where they are roughed on timothy hay. Think corn too expensive to be very profitable, as I do not wish to plow all summer to get through the winter; in the main, I would not feed much corn to sheep. Have had some bad effects from feeding corn.

Mr. McDaniels. I never had any bad effects from feeding corn, and plenty of it at that, and think it very profitable. I turn my ewes in my cornfields as soon as I finish plowing my corn, to clean out the fence corners and eat what weeds and grass I can not plow up. They eat some of the lower blades of the corn, but it never hurts my sheep or my corn. I think the corn they eat pays me two dollars per bushel in the field. I put my lambs on my meadows for fear they will not get enough to eat in the cornfield. I keep North Carolina tar in my sheep troughs for the sheep to lick with their salt, and would nearly as soon be without salt as tar. I never feed my sheep sulphur, but clip all ticks on the old sheep when I shear, and take a tin can and make it into a pepper box and dust it on all my lambs freely for ticks.

Dr. A. C. Stevenson. I have kept from one thousand to one thousand eight hundred sheep, and have handled sheep for a number of years, but now only have a flock of about sixty. Have wintered sheep without any grain by giving a run of *plenty* of blue grass. I now usually sow a field of rye for winter pasture, in my corn, the last of August or first of September. I often put some of those sheep in this early that do not appear to be doing well, and there is no need of further attention, as it seems to answer all requirements. Sheep should be kept at even flesh and not allowed to starve awhile and then be full fed. This will have a tendency to bad health, and to make a tender place in the fiber of the wool, and buyers will discover it and condemn it as poor wool. I never have practiced turning sheep in the cornfield, but favor it, for the reason that it saves labor in gathering and feeding, is not wasteful, leaves the droppings on the field already nicely scattered. No particular kind of feed made more wool than any other, unless it tended to make the sheep more healthy. Keep sheep healthy and in good even flesh and the best growth of wool and mutton is attained.

A Member. Doctor, how late do you pasture your rye in the spring?

Dr. A. C. Stevenson. I have mowed it three times and then cut a very fair yield where the ground was rich. You may pasture late

if you desire, and then it will grow as tall as you can cut it with the machine. I have pastured as late as the first of May, but I usually turn off of it on good supporting blue grass. The rye will then make as profitable a crop as corn, for it is made at much less cost. The manure of the sheep is the best of animal droppings to enrich old fields. It seems to sink into the ground better and don't evaporate as the cow droppings seem to do, and seems to be a better plant feeder, and the rye, if lodged, is equal to a clover crop for enriching the soil, and, with the sheep droppings, would enrich our fields instead of impoverishing them, which is a matter of great importance.

Mr. Magee. I feed shelled oats, bran and corn in preparing my sheep for the fair.

Mr. Beeler. I think the rye an excellent winter sheep pasture, and the winter grazing will pay the labor and cost of seeding if you plow it up in the spring.

After some further discussion, it was decided by resolution, unanimously passed, that corn was the best winter grain feed for sheep.

Mr. Lee McDaniels of Rushville, Indiana, then read the following essay on —

"INFLUENCES OF SHEEP HUSBANDRY ON LIFE AND CHARACTER."

Mr. President and Gentlemen of the Convention :

It has been assigned my duty to write an essay on the influence of sheep husbandry on life and character. The Bible and history tell us that sheep husbandry has been an occupation ever since the peopling of this earth. Abel was a keeper of sheep, and his occupation and sacrifice alike was accepted of the Lord; while Cain's occupation in tilling the soil marred his temperament so that he rose and slew his brother. This is a striking circumstance that took place six thousand years ago between two brothers, and holds good to-day. So from Abel down the shepherd's office has been honored by patriarchs, prophets, priests and kings. Abraham, Isaac and Jacob, and almost all the prophets, priests and kings were shepherds; and God honored the occupation. And I am glad to-day that I am a shepherd. The glad news was told the shepherds by night of the advent and mission of the blessed Savior, and will continue to be told till the end of time by humble men. Our occupation will always be honored, and now stands forth in importance in the United States. It is not only honorable, but its occupation has a good pecuniary influence upon life and character. Most of men feel well when making money easy and fast; you can always count

on him being in good humor. There is nothing about sheep husbandry to cause a man to get out of fix once in a year. There is no rooting up of nice blue-grass pastures, nor for one to break back in driving, like hogs always do, and cause a swearing influence to come upon man, if there is any in him, or to eat two crops of corn and then die with the cholera, for when you have him fat, you must sell, high or low. Not so with sheep. I know there is money in hogs when the tide runs smooth; but it is hard on men, hard on ground and hard on teams. Cattle come next to sheep, but when they are large and heavy they almost ruin the ground you intend to plow, and if there are twenty in a herd in the spring of the year, when they begin to shed each fellow will get his neck under a fence corner where a long rail sticks out, and rub until some fellow accidentally rubs his corner down, then in goes twenty head of cattle into your corn or wheat. This little accident will have a bad influence upon the character of most men. Now this never occurs with sheep. Then you have to wait three years for your money with cattle, and only one with sheep. When you sell your cattle your farm is without stock, and it is hard on an old man to gather up a bunch of cattle, and sometimes your grass will go to loss because you can't get them, or perhaps the price won't suit. Not so with sheep. They cost less money; may be more easily collected than cattle. Sheep begin to multiply very much earlier, and continue more regularly and rapidly; will double themselves each year. No other stock in the world will do it; for a yearling is as good as an old sheep. They are great scavengers; they will come nearer living on nothing than any other stock in the land. Although I do not advise this kind of sheep husbandry, yet drouths do come some years, when you would have to sell your cattle. Sheep will do with less water and less pasture than any animal living. Then this is the right year to hold your sheep, as all the cattle will be rushed into market too soon, and sheep will be very high; please notice these facts. Sheep will rid the farmer of every noxious weed, and at the same time profit themselves by their consumption as food and medicine, and return to the soil the best manure in the world, and evenly spread on; far ahead of cattle in that respect as it is not left in hard dry lumps to kill the grass and remain for years.

And, further, if a man should be pressed for a little money, he could sell a few of his flock and do his own selecting, which is the most important part of handling sheep. Moreover, it is an unknown fact that sheep are the only stock that you can feed whole grain to with the best of results. In short, the quick large profits to be gained by handling sheep has saved many a man

from bankruptcy and ruin. And this of itself has a happy influence upon a man's life and character, morally and financially, and we ought now, while in session, resolve to see our county representatives and have them elect a United States Senator who will favor us as wool growers of the United States with a good protective tariff; help us to supply this 50,000,000 or 60,000,000 that we import each year. Let us work. Let us ask our present Legislature to make one small change in our present dog law. Some of the townships in each county are behind as much as three years. Some are ahead and paying money into the school fund. Now, we ask that this fund be equalized and thrown into general county fund, which would pay for all the sheep killed, at a fair price, and leave a balance there to go into the school fund. The county superintendents and school men are willing for the sheep men to have pay for their sheep, as was the intent of law. We ask the change on the ground that dogs do not know a township line, and may go or come five miles to do their work. I have investigated this matter and know whereof I am speaking. This would leave the present tax on dogs just where it is, and give us plenty of money to pay for our sheep at just the price we buy and sell at for cash. This is the law, and when our township trustee understands this there will be no trouble in getting pay for our sheep according to what they are worth.

Lee McDaniels' essay was fully concurred in, and some informal talk was then passed.

An essay by Jacob Farquhar, on "How shall we Breed or Manage a Flock of Common or Grade Sheep for the Greatest Profit?" was read by the secretary, Mr. Sunman.

Adjourned to meet at Agricultural Rooms at 9 A. M.

SECOND DAY'S SESSION.

THURSDAY, JANUARY 6, 9 A. M.

First thing in order was the president's address. He said:

Wool Growers of Indiana:

We have no reason to be discouraged, and I am very much in hopes our semi-annual gatherings will cause a greater number of sheep to be raised in Indiana. There are many reasons why there should be more raised. Our climate and soil are favorably situated for sheep husbandry. The United States should grow all the wool she manufactures, and Indiana should help to do her share. Raising sheep is a good occupation, both as to health and profit and exerts a good influence upon the shepherd's character. There is no hope of getting shut of all the dogs of the country. Sheep and dogs do

not do well together. Either dogs must be scarce and sheep plenty, or sheep scarce and dogs plenty. Where there are lots of sheep, school houses and churches are plenty and well attended in the country, and prosperity is plain to be seen, land bearing a good price and farmers well up with the times; but where dogs are plenty, the reverse is true, idleness and indolence almost taking possession of the farm; land cheap, and everybody wanting to sell and can't. Let us all try to raise more sheep and influence our neighbors to raise, and thus do what we can to spread civilization and good cheer.

Dr. J. N. Navin then addressed the association on

DISEASES OF SHEEP AND DIFFERENT BREEDS.

The sheep is naturally the healthiest, though the tenderest, of all domestic animals, scarcely ever getting sick, except from some great provocation, malarial influence having more to do with it than all other causes combined. The sheep is an inhabitant of every climate from the torrid to the frigid zone. It seems to adapt its shape and the texture of its wool to the climates of every country of which it is a native. In hot climates its wool is scarcely finer than hair, and in temperate or colder climates it is finer, until the silky wool of the Saxony sheep is reached. It also can and does subsist on whatever fare its native country produces. In fact, sheep in some countries live chiefly upon salt fish, and in all countries its flesh is admitted to be the healthiest of all animal food. In Europe the sheep is subject to about

Twenty-five Diseases,

None of which are incident without cause or provocation, except, perhaps, thrush in the mouth, or blain. With these two exceptions, all others are the result of treatment, or of malarial influence. Foot disease, the rot and dropsy are the result of malaria and pasturing upon wet and marshy lands. Diarrhoea and dysentery are the effect of feeding, or of some affection of the liver by malaria. Water on the brain, epilepsy, apoplexy, hydatid on the brain and lockjaw are caused the same as in other domestic brutes. Bots in the sinuses of the head are the larvæ of the fly, so called, but smaller than those which horsemen dread so much. Bronchitis, lung fever, colic and inflammation of the brain are also manufactured diseases, or the effect of treatment or usage.

The Rot

Is, perhaps, the most formidable disease of the sheep. It has its origin in the liver, and subsequently affects the entire glandular

system, the lungs, the kidneys and the entire cellular system; the abdomen becomes filled with serum (water) of a greenish color. This is called dropsy by some veterinary surgeons and sheep raisers. But this is erroneous. Its symptoms and cause are of more importance to know than is the remedy. These are dullness, bluish color of the skin, diarrhoea and thirst, which are the main symptoms of the disease. Thirst, however, is the most noticeable, from the fact that sheep never drink in parts of Europe until taken with the rot. Neither do they eat salt there. The great and immediate cause of rot is attributable to wet or marshy lands, except in wet seasons, when all lands may rot more or less. And strange to say, no sheep ever contracts the disease on either dry or wet lands, while rain continues to fall and keeps fresh upon the ground. It is therefore a prevailing opinion, if not certain, that the little insects found in the biliary duct and gall bladder, called flukes, are taken up by the sheep off the grass after the ground dries up, and are passed into the liver through the absorbents or lacteals of the bowels, which take up the nutriment out of the food, as trichina in pork is, by the human subject. After sheep are seen to drink, or the blueness of the skin is observed, they are pronounced as having the rot, and if not in order for the butcher they are immediately removed to luxuriant pastures and fattened, and will fatten (if not more readily) equally as readily as healthy sheep for at least two months.

Dropsy—Red Water,

is a disease much resembling the rot in many respects; the water in this disease is found in the chest and in the abdomen, and of a reddish serous color, differing from the green color in rot. The symptoms of the disease are enlargement of the abdomen, a puffy swelling beneath or between the jaws, hurried breathing; either costiveness or diarrhoea may be present. If observed in time it may be successfully treated until the sheep is found uneasy, largely swollen, and breathing hard; at this stage of the disease nothing can be done.

Foot-rot is a very troublesome disease to the shepherd in wet or in muddy places, or wet pastures.

Cause.

Between the hoofs of the sheep a small aperture may be seen, called the biflex canal, whose office it is to secrete an oily fluid for the purpose of lubricating the hide between the hoofs, it being called into action by every step the sheep takes in providing its food, therefore, when perpetually wet, or constantly dirty, the parts swell, and this secretion, already spoken of, is stopped or retarded;

therefore, not only is the hide deprived of the oily secretion, but the secretion itself becomes an irritant of the glands which secreted it, therefore inflammation of the parts is the consequent result. Hence foot-rot, which, unless retarded and remedied very soon, destroys not only the hoofs, but the glands, and perhaps the coronary border which secretes the hoofs.

The Most Profitable Breed, or Breeds of Sheep.

Much has been written and published in the agricultural papers by the different breeders of sheep, evidently for the purpose of selling portions of their stock for high prices; each writer, of course, true to his individual interest, therefore not stopping at any assertion likely to be credited by the unwary. Each succeeding year for the last ten or twelve years has brought us such immense weights of fleece over the last year's weight, that at such a ratio our stock of sheep would appear to be turning into wool, leaving very little to be placed to the mutton side of the account. A few years ago no sheep-master would venture to assert that a ewe of his sheared over twelve pounds, or a ram more than fifteen pounds. This, then, was considered a superior weight of fleece, and indeed it was, and still is.

Subsequently, however, men have advertised fifteen for ewes and twenty for rams and wethers. To beat the above weights, innocent men, just for an experiment, you know, weighed their fleeces and became agreeably surprised to find that their flocks outstripped all prior weights, and inform the public that they obtained twenty-five and some thirty pound fleeces, and thought themselves monarchs of all they survey, if not the American continent, and of course the universe, until Kansas is heard from with thirty-five pound fleeces. Now, if one man upon the face of the earth is dupe enough to credit such an assertion, he should be tenderly taken care of. Thirty-five pounds of wool, five hundred and sixty ounces, in one year's growth, is one ounce and a half per day, less twenty-five ounces divided upon the three hundred and sixty-five days in the year. Will any sane man acknowledge himself such a dupe as to credit such a fabrication, especially when we find the weight of carcass of those sheep averaging one hundred and ten to one hundred and twenty pounds after shearing. Next season it is expected that the above will be beaten, and if such increase of wool reduces the carcass, we shall see men publishing heavy carcasses. To be just toward my Kansas friend, I shall strike a debtor and creditor sheet, allowing him thirty-five on the creditor's side, and charging a debit against him of yolk ten pounds and dirt ten pounds, leaving of clear wool fifteen pounds. Wool, not yolk (grease), is what the people delight to read about—it is all that will draw money.

Gentlemen, the controversy is scarcely waged between the proprietors of long-wooled breeds, or middle-wooled breeds, or long against middle, but between both, and the short-wools or Merino. Not being a breeder or owner of sheep, I therefore have no enemy to punish or friend to serve. I take the attitude of the Irishman on board a ship in a storm, who prayed first to God and then to the devil. When remonstrated with he said: "Sure I don't know whose hands I may fall into, and I don't want enemies." It seems to me that no farmer who is capable of doing business should be prejudiced in favor of any breed. I should take 1,000 sheep which yield seven pounds each, 7,000 pounds of fine wool; this is liberal for fine woolled sheep, at 60 cents per pound, \$4,200; against 1,000 sheep yielding twelve pounds each, 12,000 pounds, at 50 cents per pound, \$6,000; this leaves a balance of \$1,200. This is not all, for the difference in weight of carcass is equally as important as an item for food as is the wool as a fabric. When doctors differ, however, it should be no wonder that farmer's notions should be wide asunder. My preference, if a wool grower, would be found for either the Downs, the Leicesters, the Cotswolds or the Lincolns. I would have both mutton and wool, and consequently more money.

DISCUSSION.

A Member. Doctor, what would you use to destroy ticks and foot-rot?

I would use tobacco juice, one quart to one ounce of carbolic acid, for ticks; rub spirits of turpentine on the biflex canal for foot-rot.

The president then read a communication from the National Wool Grower's Association in relation to the Eaton bill. Messrs. Clark, Stevenson and McClelland, committee, report.

The Eaton Bill.

The committee appointed to consider the communication received from the National Wool Grower's Association reported the following:

Resolved, By the Indiana Wool Grower's Association, that they approve of the Eaton bill providing for the appointment of a commission consisting of nine members of practical experience, to take into consideration the readjustment of the tariff, and make to Congress such suggestions, after a thorough examination, as they may think best for the interests of the country. Further,

Resolved, That the president and secretary of the Indiana Wool Grower's Association be and they are hereby instructed to request the Indiana members in Congress to use their influence and votes in favor of the immediate passage of the bill.

RESOLUTIONS OF RESPECT FOR GOVERNOR WILLIAMS.

Committee appointed to draft a resolution on the death of our late governor was C. F. Darnell, C. A. Howland and T. W. W. Sunman.

Resolved, That in the death of our worthy brother and co-worker, Hon. James D. Williams, late governor of Indiana, the State has lost a good citizen and our association a much esteemed member.

S. W. Dungan, Thos. Nelson and W. L. Schooley were appointed a committee to consider the amount of premium the association would pay on wool exhibited at the May meeting, 1881.

Report—\$1 on first and 50 cents on second premium awarded on the different classes of wool. Adopted.

Adjourned till afternoon.

Called to order at 2 P. M.

SECRETARY'S REPORT.

Secretary T. W. W. Sunman, of Spades P. O., submitted a report of his stewardship, as follows:

To the Honorable President and Gentlemen of the Indiana Wool Growers' Association:

The secretary asks to report. There are now on the roll some sixty names as members, all of whom are live men and workers in the cause. I think much good has been done by your society since its origin, and look for much more good to be done by it in the future, for at no time since the settlement of this country was such an interest taken in the raising of sheep and the growing of wool as at present; and we need apprehend no danger of the market being glutted in our generation, for it will take many millions of sheep to supply the wool needed in this country to take the place of the imported article—for all countries owe their wealth not to what they import, but what they raise at home. Then as more sheep are raised more mutton will be used, which will tend to keep the supply below the demand; and then last, but not least, we have with us always "the faithful house dog," whose wants will be supplied whether we have to import wool or not.

I would recommend that this association instruct the secretary to write to all agricultural societies in our State, asking them to classify sheep as you may in your judgment recommend, and ask them to make their premium lists in accordance, so as to be more acceptable to sheep breeders than they now are.

John L. Thompson then read an interesting paper on

HOW AND WHEN TO SHEAR SHEEP.

It is plain that we can get no time that will suit *all* persons and circumstances. From last season's experience, I think we must

shear earlier than we have been doing in the past, as there was a great deal of trouble on account of maggots and a number of sheep lost, which can only be avoided by early shearing. And in order to do this, we must discard the practice of washing the wool on the sheep's back, as this can not be safely done much before the first of June, in this climate, and by the time the sheep are dry and the oil has sufficiently raised, it is the middle of June before the shearing can be done. I would therefore recommend shearing without washing, and as early as the season will admit of with safety to the sheep, say from the 1st to the 25th of May for the general farmer; but breeders who make a specialty of sheep, and have stables or shelters for them, will find it to their advantage to shear still earlier, especially ewes that are suckling lambs, as the lambs do much better after the ewes are shorn. Ewes that have lambs loose considerable of their wool if not shorn till the first of June. The ewe will give much more milk after being shorn, as the extra heat tends to dry up the flow of milk. By shearing early we get a greater growth of wool, as April, May and June are the best growing months, and this gives the sheep a good protection from the hot weather of July and August. Of course we must avoid extremes in this matter, and if we shear early we should house our sheep during cold nights, cold winds and rain storms. Humanity demands this if we shear late. In fact, early shorn sheep can stand the same degree of cold better than late shorn ones. As Randall very truly says: "The change to them is not so great or sudden as when cold storms follow shearing after they have been sweltering in their fleeces in hot weather."

How to Shear.

"Shearing should be done on a clean floor." We shear on the barn floor with the sheep penned in a small stable (floored on a level with the shearing floor); this saves unnecessary lifting. The stable should be kept well covered with saw-dust or straw; saw-dust we like best. We use a bench about knee-high—a little higher for small sheep and somewhat lower for large ones.

The shearer sets the sheep on its rump, on the bench, and standing with his left foot upon the bench, lays the sheep's neck across his left knee, with its right side against his body, commencing at the brisket and open the fleece down the right side of the belly to the right flank or stifle; shear the belly in course, turning the wool to the left. Begin at the brisket and shear up the under side of the neck to middle of the under jaw, shearing left side of the face and neck to the left ear. Turn the sheep slightly around with its feet to you; shear from left ear down neck and side, taking in fore-leg and shoulders to left flank; next shear top-knot (if it has any) and

head to right ear, down the neck and side, shearing well around to middle of the back and down to the point where other courses stopped; incline the sheep to you, begin at the back of the left hind-leg, shearing in courses with the leg to the thigh joint. Lay the sheep down on the right side, shear left hip to the tail; shear lengthwise of the tail and well under on the right hip; while in this position shear the twist and inside of right hind-leg. Raise up the sheep (keeping a little wool under the left hip that it may rest comfortably), turning the shorn side to you, with its head again across your left leg; shear from right ear and jaw down the neck to right shoulder, grasp the right fore-leg gently in the left hand, shear fore-leg and shoulder; shear the right side down to the flank, inclining the sheep gently to you as you shear down. The sheep is then laid on its left side, and the wool shorn from the right hip and leg, finishing at the hoofs of same.

The more quietly and gently you handle the sheep from the time it is penned till shorn, the better for both it and you as regards "life and character."

[This essay was regarded so complete that it admitted of no discussion.]

Mr. C. A. Howland read an address on

"WHETHER IT IS MORE PROFITABLE TO SHEEP RAISERS TO SELL THEIR BUCK LAMBS TO BUTCHERS OR CHANGE THEM TO WETHERS AND KEEP THEM TILL THEY ARE FULLY MATURED."

The question assigned me for discussion by this honorable association, "Whether it is more profitable to sheep raisers to sell their buck lambs to butchers or change them to wethers and keep them till they are fully matured, or at what age should we sell our sheep," does not admit of any very extended argument. Much depends on the facilities possessed by the wool grower for sustaining sheep and suitable shelter for the ewes and lambs during winter and spring; for if we do not possess these requisites for successful sheep raising then we had better sell them at once, for without the above-mentioned essentials we can not profitably raise sheep to sell at any age; for in order to sell your lambs to butchers at remunerative prices they must be dropped in the latter part of winter or early spring. Lambs dropped after the weather becomes warm, grow less vigorous, and the demand for lambs lessens as the season advances. Lambs dropped in February or March may be sold to the butchers or weaned in May or June, giving the mother sheep ample time to recuperate and bring you an early lamb the ensuing year. Perhaps I am talking too much about early lambs. Pardon

me; but if you would have your lambs pass through their first winter with as little care as older sheep they must come early. Again, the ewe that is worried by her nursing during the hot months loses flesh, and when winter comes you have a sorry flock, consisting of poor ewes and stunted lambs that will require more feed and attention to take them through the winter than would have been necessary to bestow on the same number of ewes with early lambs the previous winter and spring. We would recommend that the best lambs be carefully selected to keep, though the butchers offer a high price for them; the ewes for breeding, and bucks changed to wethers to be sold, when fully matured, for mutton. Ewes that are not good breeders and wethers may be profitably sold for mutton any time between three and six years of age. Sheep, unlike any other kind of stock, can be slaughtered at an age that is most convenient to the owner to fatten them. For instance, if the season is not favorable for the production of grass, they may be carried over to a more favorable season without loss, the wool more than paying all expense of keeping them; and at no time would we recommend feeding grain to sheep to make mutton, unless in conjunction with good grazing. We believe that all stock raisers should keep good stock as long as it can be kept profitably, and dispose of inferior stock at the first opportunity. And as wethers usually grow larger they yield a heavier fleece, make better mutton and are more comely than ewes, hence make a more attractive flock, which tends to ornament and make profitable sheep raising. We owe it to our families and neighbors to make our business both profitable and interesting. We learn from history that sheep were the first animals domesticated by man. Men and women of all ages have written and sang of their innocence and beauty, and to my mind there is nothing that would have a tendency to inspire one to write or sing of that which is beautiful in nature more than a well kept blue grass pasture, interspersed with large, well-bred sheep.

This paper was discussed at some length, the most important being as follows, which seemed to take pretty much the same channel as yesterday's discussion:

Mr. Howland. I think, to raise sheep profitably, they must be grazed, and not stuffed with grain—both sheep and cattle. The general farmer must raise his wool on grass, and not corn. I do not wish to plow all summer to get my stock through the winter.

Mr. McDaniels finds it very profitable to feed all the corn his sheep want, and, in fact, do just what his sheep tell him to do, except to

go out in the cold snow to have a lamb, when they might choose a more comfortable place under the shed.

Here opinions were expressed on both sides, some having bad effects from feeding corn. This was generally believed to be where corn was injudiciously fed.

Dr. Stevenson said it made but little difference *what* they were fed, so they are well kept, and then gave an instance of some cattle wintered on hay alone that looked as well as those grained. The man who grazes altogether does not wear out his land, like the man who plows, and this is a matter that ought to be considered carefully.

C. F. Darnell, Uriah Privett and John L. Thompson, committee on grading sheep at fairs, offered the following resolution, which was adopted by the association, as the four classes sheep men desired fair managers to make in classifying sheep for premiums:

Resolved, That it is the sense of this association that there should be four classes of sheep for county and grange fairs, to include (1) long wool, (2) fine wool, (3) middle wool (which includes all the families of the Downs), and (4) includes grades and crosses.

COMMITTEE ON PROGRAMME FOR NEXT MAY MEETING.

The committee on programme for the May meeting submitted the following:

Semi-annual address of the president.

Appointment of all committees for the session.

"What is the best mode of wintering a flock of fifty or more sheep?" by D. H. Thompson.

"Manner and time of breeding ewes, and give the best mode of caring for lambs from time of birth to weaning," by Uriah Privett.

"What is the best cross to put on our common sheep?" by Lee McDaniel.

"What is the best mode of caring for the different breeds of sheep, including shelter, etc.?" by S. W. Dungan.

"The shepherd dog and his Character," by William Hodson.

"Characteristics of the Oxfordshire Downs sheep," by T. S. Cooper.

J. W. ROBE,	} Committee.
C. F. DARNELL,	
M. M. PIERSON.	

The rules which should govern the competition in sheep at the State Fair were discussed, the general sentiment being favorable to the adoption of stricter rules, as to age, class, time of shearing, etc.

The association then went into the election of officers, with the following result: President, Fielding Beeler, Indianapolis; vice-

president, D. H. Thompson, Waldron; secretary, J. W. Robe, Greencastle; treasurer, S. W. Dungan, Franklin.

Notice was given of an amendment to the constitution, providing for electing a corresponding secretary.

Adjourned, to meet next May, in conjunction with the short-horn breeders.

F. BEELER, *President*.

J. W. ROBE, *Secretary*.

P. S. Mr. McDaniel moved, a vote of thanks from the association be tendered to Messrs. Robe and Sunman, for taking the minutes of the meeting. Passed, unanimously.

BEE KEEPERS.

SECOND ANNUAL STATE CONVENTION.

The bee keepers of the State met in annual session, at 10 o'clock A. M., in the rooms of the State Board of Agriculture, and after friendly greetings, adjourned to 2 o'clock P. M.

The convention was called to order by President J. C. Belman, of Indianapolis. A call of the roll by Secretary Daugherty showed fifty members present.

Pursuant to programme, the secretary reported that of the sixty-two members on the rolls of the association, sixteen had sent to him reports showing total number of "colonies" represented by them to be 719, with no surplus honey or wax. In connection with the report he also submitted the following:

THE BEE KEEPING INTEREST.

To the Honorable State Board of Agriculture:

GENTLEMEN—At the late convention of the Indiana State Bee Keepers' Association the following resolution was passed:

"*Resolved*, That the secretary of this association be instructed to confer with the State Board of Agriculture in respect to the further encouragement of the science of agriculture in the State of Indiana."

In pursuance of this resolution, I would respectfully call your attention to the bee keeping interest in this State. Your honorable Board, by the offer of premiums and other means, have encouraged almost every other department of industry in the domain of agriculture, manufacture and science, enabling those in search of knowledge to come to safe and inexpensive results. Stock raising, horticulture, dairying, wool growing, poultry raising and tile making are each separate and important interests receiving your special care, and by virtue of this precedent the bee keepers feel that they, too, are entitled

to some consideration at your hands. Too long has the idea prevailed that bee keeping is a minor pursuit, in which so few can profitably engage, that to neglect it as a prominent feature of our National industries should not be regarded as detrimental to the general welfare. We hope a few facts will place this subject in a new light. Indiana has growing upon her soil almost as large a variety of honey-producing plants as any State in the Union. We have honey-producing trees in vast numbers, such as basswood, poplar, maple, willow, and the various fruit trees. We have among the countless multitude of flowering shrubs and plants, white alsike and red clover, buckwheat, goldenrod, the many astors and mints, and of small fruits, currants, goosberries, raspberries, blackberries, etc. In fact, from the first blossoms of early spring to the coming frost, the flora of Indiana are sufficiently prolific in the secretion of honey to afford our little pets abundant forage on which to work.

The bee keeping interest has become one of vast national importance, and is growing larger each year. To-day America stands first in the world for honey production, as well as for scientific management and improved implements for the apiary. We have, within the last two years exported more than five hundred tons of American honey to the Old World. We are also producing home-bred American queens, that at least are equal, if not superior, to those we import from Italy. It is estimated that we have in our State thirty thousand colonies of bees, producing an average yield of fifteen pounds to the colony, or a total of four hundred and fifty thousand pounds of honey, which, at an average of twelve and a half cents per pound, would produce a revenue of fifty-four thousand, two hundred and thirty-five dollars, and I believe the estimate none too high. There is no reason why Indiana should not be in the front rank with products from the apiary. We have no reliable statistics from which to glean information on this subject, but through the efforts of L. G. Newman, president of the National Bee Keepers' Association, arrangements have been made to have complete statistics gathered by the government, while taking the census. Arrangements are also being made by the executive committee of the Indiana State Association to gather all possible information on the subject in this State. As regards the offering of premiums, etc., I would respectfully suggest the following as a competitive list: Best package of comb honey, one pound or more; best package of extracted honey, one pound or more; best crate of honey in the comb, in the most marketable shape; best display of honey, both comb and extracted; best machine for extracting honey; best display of wax, and the best display of bee keepers' supplies.

In conclusion, I would ask that you also inquire into the feasibility of the establishment of an apiary, in connection with our agricultural college. Other States have gone far ahead of our own in this respect. Michigan has, in connection with her agricultural college, an apiary, managed by a competent, practical agriculturist, whose observations are recorded and published, and whose methods of treatment of the little insects are always open to the inspection of learners. The State of Tennessee has followed the worthy example of Michigan. This department, in connection with the agricultural colleges, should be, and will be, if successfully managed, not only self-sustaining, financially, but a repository of demonstrated facts and scientific knowledge, to which the public should have full access, and bee-keeping will thereby be raised to the rank of a surely remunerative pursuit, instead of a haphazard speculation. Now, should your honorable board so far interest itself in this enterprise, as to ask, by formal resolution, the board of trustees of the State University to establish an Apiarian professorship, in connection with the agricultural department of the University, we think it will have done no more than the bee-keepers of Indiana have a right to expect of them, as the guardians of all industrial interests. Such a department would not only be a source of scientific knowledge, but a financial success, and shortly become to the University a source of revenue. Let it start with an apiary of moderate size, say twenty-five or fifty colonies, and it will even pay a large interest on the investment, from the first year. There are many questions yet to be solved, by experiments, which could be so well done only in an apiary of this kind.

Thanking you, gentlemen, for your kindness, I have the honor to be, respectfully yours,

FRANK L. DAUGHERTY,

Secretary of the Indiana State Bee-Keepers' Association.

Following the report of the secretary, J. C. Belman delivered the

PRESIDENT'S ADDRESS.

Gentlemen of the Bee Keepers' Convention :

You are again assembled at the capital in State convention to deliberate upon the interest pertaining to apiculture—bees and their product. Since your last meeting but little has transpired among apiarians throughout the State except what is patent to all—a general regret that the harvest of the busy bee has been, in commercial parlance, “short.” Every one present is fully advised as to the causes which produced this failure, and that against such a result there was no possible remedy. Very many colonies failed to secure

sufficient quantum for their winter stores, and artificial feeding was necessary. The product for the market was exceedingly limited, and instead of the choice wild clover or apple blossom honey, there was sold the fall flower or wild exotic honey, not as palatable or marketable as the former. Close up to the last working days of the industrious bee, came a cold wave in October from the polar regions, which found very many of our bee keepers asleep, and the sequel was, the weakening and loss of scores of colonies. In view of this unusual state of apicultural affairs, there can not be expected at this session any encouraging reports as to the financial results of the year 1880. Such a condition of discouraging surroundings in apiarism may not occur again in a lifetime, while the probabilities are that the approaching season will be grandly successful and productive. Therefore I give you good cheer and urge you to delve down deep into the fields of apiculture, and, as you develop the mysterious instinct of the bee and its many but certain workings, let it be your highest pleasure to impart all information you may possess to your fellows, until the bee keepers of Indiana shall receive the plaudits of sister States—"Well done, good and faithful servants." This may be our triumph, provided we invoke the ordering and guidance of an all-wise Providence.

While there is a possibility of too much care in the housing and wintering of the bee from what it would receive in the trunk of a tree or a hole in the ground, there is undoubtedly much to be apprehended in the carelessness and indifference and incompetency, on account of which many colonies are lost, and the amateur, and, indeed, those more experienced, attribute the fault of their mishap and failure on the bees, on the hive, and even the ways of Divine Providence, when to themselves and none other they should charge the mismanagement and unwise, indolent and injudicious handling. Your president has received many letters during the year from those discouraged and weak in the faith that bee keeping was an unprofitable business, and asking in the strictest confidence whether the time employed in their management would not be bettered financially in other less stinging pursuits. I suspect, gentlemen of the convention, that we are all too prone to environ bee keeping with much mystery as to the "pure stock," peculiarly constructed hives and frames and moth-traps, and bug-bears that suggest money-making by those who, for the love of pelf, will not let the bee severely alone in its simplicity and industry. Nature and instinct are the allies God has given that wonderfully industrious insect, and when man crosses their pathway with his clap-trap the result must be fatal. I will be understood as referring only to the extremists in this matter. Less of artificial processes, less of hand-

ling, less of fancy and extravagantly-built hives, with parlors and hecatombs and ante-chambers, and less of prying into hives to satisfy the curiosity to see the queen and the dear, lovely little egg and the brood, etc., would, in my judgment, return many fold advantages to the apiarian. During the present severe winter there are those who uncover their hives and with a stick at long range stir up the bees to find out, as they inform you, whether their bees would be ready to do big work in the coming May. Others have drawn up a movable frame, crowded with bees, to find out if the dear creatures had enough honey to feed upon, and then turn it over and over to see that darling queen—and the thermometer down to zero. Is it any wonder that those bees who survive being poked to death are not all frozen and lying on the floor of the hive an inanimate insect? Would it be sacrilege to suggest that Father Adam might have done better than to have transmitted to posterity such mountebanks of humanity?

In leaving this pen portrait of a very unworthy apiculturist, will you pardon your president in a brief description of a simply constructed hive made many years ago by Townley, of Cincinnati, and in doing so I would not be understood as depreciating the Langstroth, Quinby and other excellent hives. The Townley hive was made of two-inch plank, well seasoned. There were moveable frames, over which were the section boxes, two ventilators to close or open as the temperature on the inside required. In the rear a large glass with an outside door, which, when opened, the bees could be distinctly seen at their work, without being jarred or disturbed. The joints were all close and air-tight, so that in the summer, on the inside, there was not too great a heat, and in the winter the temperature was never below freezing, although the hives were left on the summer stands the year round. My own experience has satisfied me that after determining that they have a sufficiency of food for the winter and that the moth are not among the combs, to let the bee alone. The opening should be closed up, so that but one bee can pass in or out. The surplus boxes should be removed and the chaff cushions overlaid with carpet introduced. Keep your ventilators partially open and wrap around each hive a plentiful quantity of straw and old carpets around the whole, and I am authorized to say that in no instance have I known the colonies not to do well. Toward spring, as the warmer weather approaches, I feed plentifully at the opening with syrup made from a sugar, perfumed slightly with anise, giving the bees, day and night, all they can carry into the hive on the lower frames. Then when the surplus boxes are introduced the bees bring in and fill them with the orchard and

clover-blossom honey. The fall flower honey I leave them to gather for themselves as a winter supply.

As to the character and comeliness of your packages, permit me to urge your closest attention, that they may be neatly and carefully prepared, and so presentable for the customer, as to command the highest commendation and the best market price. Various methods have been given in the bee journals, and yet, much depends upon the apiarian, as to how far these may be a success. To my thought, there is no table condiment so delightful to the eye, and palatable to the taste, as honey, in uniform and roundly-formed, capped packages. I would recommend that your secretary be empowered to obtain the names and the postoffice address of every bee keeper in the state of Indiana, requesting from them the number of their colonies, amount of honey produced, kind of hive used, and such other information as would be useful to the State association; and, to this end, that the secretary draw his warrant on the treasurer, countersigned by the president, for such sums as will procure printed circulars, postage, papers, etc., necessary to carry out this purpose.

At our first annual meeting, the association adopted a constitution and rules for its government. Experience and more matured thought has demonstrated that many of the provisions are crude and not up to the requirements of this body. I suggest that a committee be appointed, and authorized, to take the matter under careful consideration, and report the same to this convention, for its action.

I am also persuaded, gentlemen, to call your attention to the propriety of having an apiculture department, at every annual State Fair, in which may be exhibited apiarian supplies, hives, honey products and packages, strained and in comb, etc., that a greater interest may be awakened among the farmers of the State. The wives and daughters of our farmers ought to be apiarians. The work would be congenial to them, and the profits arising from their handiwork would be far greater than any other employment they can engage, on or about the farm. I can not but believe that we owe it to the farming interests of our state, that circulars and information in reference to the bee and its management should be scattered very liberally over the State, that the farmer element, the yeomanry of every land, may be convinced and persuaded of the great work awaiting development at their hands. If the suggestion meets with your approval, let a committee be appointed to make the necessary arrangements with the State Agricultural Board, through its able secretary, Mr. Heron, for such space and accommodations as will meet the wants of the association, and also that the neces-

sary steps be inaugurated to diffuse bee keeping intelligence in every county and precinct of our great commonwealth.

As to the present status of the association financially, I refer you to the annual report of Hon. Isaac N. Cotton, treasurer, and also the report of your secretary, Mr. Frank Daugherty. The society is not in debt, and have a small balance to their credit in the treasury. There is, in the opinion of some of the membership, a necessity for a change in the price of initiation, or rather an increase from fifty cents to \$1 per annum. It is urged that a need will arise for additional funds to pay expenses of new projects that may be ordered by you, and which are deemed necessary for the augmentation and furtherance of the interests of the society. I trust such action will be taken in this regard as will facilitate this end.

I am also impressed that profitable advantages would be obtained by organizations of county societies in every portion of the State, from which auxiliaries the State organization would receive valuable statistics and other matter beneficial to the apicultural interests of Indiana. May I be permitted to urge upon you the propriety of taking such steps as will bring about these results?

In closing this hastily prepared address, I must refer with pleasure to the very valuable services rendered the apiary interests by your secretary. His time has been largely contributed to the advancement and development of the busy bee in Indiana, and I cordially recommend his re-election to the trust he has so commendably and ably filled during the past year.

With many thanks for the honor I have enjoyed at your hands, I earnestly invoke your continuity and faithfulness in a profession which should be, as I believe it is, the pride of our lives.

After the reading of the address the convention went into the election of officers, resulting as follows: President, Dr. J. H. Orear, Liztown, Hendricks county; secretary, Frank L. Daugherty, Marion county; treasurer, Isaac N. Cotton, Traders' Point, Marion county.

The following essay, prepared by Rev. M. Mahin, Huntington, Indiana, was read by the secretary:

MOVING BEES BY RAILROAD.

It is often necessary to move bees by railroad, and it is well to know the best way to do it. Having had a somewhat extensive and varied experience in the matter, I can, perhaps, give information that may save some one from serious loss.

I have often had occasion to move bees in box hives, and I have never met with the slightest loss in doing so. I have followed the plan recommended in King's "Bee Keepers' Text-Book." Turning

the hive bottom upwards, I have tacked coffee sacking or carpet over the mouth of it, holding the sacking or carpet in place by pieces of lath. The hive can then be placed in an express car, bottom upwards, and carried with perfect safety. I have not tried shipping box hives in freight trains. If the bees are to be confined more than a few hours, wire cloth must be used instead of carpet or sacking, as the bees would cut through the latter and escape. There is no danger that they will smother, unless the weather should be very warm, and the hive very full of bees. It would not be safe to move a hive having new combs full of honey, in hot weather, or in any weather.

But we are not so much concerned with moving bees in box hives, as in those having movable frames. In shipping bees several things need to be attended to:

1. They must be carefully shut in, so that not a bee can escape. A very few loose bees can quickly demoralize a whole crew of railroad hands and a few draymen thrown in.

2. The frames must be secured so that they will not be jostled out of their places. This can best be done by driving a three penny fine nail through each end of the top bar of every frame, and into the hive. But some one may ask "What will you do with the bees while that is being done?" That is easily managed when you only know how. Have made a lot of wooden strips the length of the top bars of the frames, and large enough to fit down between them. With these strips pressed down between the frames, the bees are effectually prevented from coming out at the top of the hive. I use a very simple and convenient device for closing the entrance of the hive. I take a piece of inch board as long as may be necessary, (for the Langstroth hive it would have to be just as long as the width of the hive inside of the portico,) and $1\frac{1}{2}$ inches wide. Near each end of this I saw in, about an inch, and cut out the wood between the saw cuts, and then take a strip of the same length one inch wide, and one-half inch thick, cut out a piece the same length as the notch in the other, and half way through it. This I nail to the notched edge of the larger piece. When nailed together I have a block having an opening under one side, when laid down on its face, half an inch high, and six or eight inches long. Over the opening in the top, which is one inch wide, and six or eight inches long, I tack wire cloth. When this is placed against the entrance to the hive, the hive is effectually closed, and yet there is abundant ventilation. The device is easily and cheaply made, and there is no other way so convenient for shutting bees in the hive for any purpose. There should be a hole through each end of this block through which a nail may be passed, and driven slightly into the

alighting board to keep it in place. When you have put the strips between the top bars of the frame, and have tacked the shutting in block to the front of the hive, you can proceed to fasten the ends of the frames at your leisure. The heads of the nails should be left out, so that they may be easily pulled out with a claw-tool.

When the ends of the frames have been tacked fast, the strips may be removed, or so many of them as may be necessary to give free ventilation. Now have a honey board with as many as three inch holes in it, covered with wire cloth, and nail it over the frames, remove the block that shuts the bees in, and let them fly until evening. Then when all are in, nail your block on the entrance of the hive, and it is ready to ship.

3. The third thing necessary is plenty of ventilation, and as that has been provided for, in describing the manner of shutting the bees in, nothing more need be said about it.

4. Care should be taken that the combs shall not be heavy with honey. If they contain much honey, it should be extracted, even if it has to be fed back.

5. The hives should be so placed that the combs shall be lengthwise of the car. This is especially important, if they are to be shipped as freight, for in switching cars, they get some awful jolts, that would knock combs at right angles with direction of the track, clear out of the frames. Shipped by express, it does not matter how the hives stand.

6. If many hives are to be shipped together, and the weather is warm, they should, by all means, be placed in a stock car, that the animal heat may not injure them. In 1878, I shipped over forty hives, from New Castle to Logansport, a distance of eighty miles, in a stock car, and all went through in perfect order. In 1880, I shipped forty-seven hives, from Logansport to Huntington, on a warm April day, in a box car, left only partly open, and they were badly damaged, as, in about a dozen hives, the combs were more or less broken, and in some the bees were nearly all dead. In some hives in which the combs were not broken, and there were but few dead bees, the brood was all killed, and after some days dragged out. They were damaged more than they otherwise would have been, because there had been an unusual flow of honey, for April, and the honey had not been extracted. I have shipped bees at all seasons of the year, from March until late in the summer, and never had any misfortune befall them, except in the one case above-narrated.

The paper was discussed by several members. "Wintering Bees," the next question, was then taken up.

Mr. Benham packed in straw; did not think they could be too well protected.

Mr. Fells used large boxes around the hives, well filled with dry leaves, and had succeeded beyond his expectations.

The Secretary, in wintering, removed all combs that the bees did not cover; thought five or six combs a plenty where care was taken to give those containing sufficient stores. Placed sticks across the top of the frames to keep the cloth from settling down, to allow the bees to cross from one frame to another. Used chaff division boards on the sides with pieces of carpet, blankets or quilts, and chaff cushion on top. Thought almost as much depended on the fall management of bees for safe wintering, as packing. Was satisfied that young bees were almost a necessity; they were better able to withstand the cold and confinement than old, half worn out bees.

Mr. Davis said his bees had been flying out, leaving the hives a few at a time, all winter, until some of the hives had become entirely depopulated, with very few dead bees around the entrance.

Mr. Fells thought old bees the cause, with which the President and *Mr. Brown* agreed.

The Secretary did not think that this trouble could be entirely attributed to old bees; he believed that there was disease, something which we were not able to discuss.

Mr. Raab thought old bees the principal cause, but believed, with the secretary, that there was still a disease at work also.

The discussion was further indulged in until quite late, when, on motion of *Mr. Belman*, the meeting adjourned until 9 o'clock the next day.

The meeting of the second day was called to order at 9 o'clock, with President *Orear* in the chair. After the usual preliminaries, allowing of bills, etc., the convention proceeded to the discussion of various subjects, Albino bees being the first.

Mr. Brown believed them to be a distinct race, while the voice of the convention decided them to be a cross from the Italians.

Introducing virgin queens came next. A majority of the members seemed to think the best plan was to let them run in at the entrance, taking their chances, believing the loss would be no greater than in introducing queen cells.

Hiving swarms was discussed at some length.

The secretary was then called on to describe his mode of making candy for bees, some samples of which seemed to please the beemen as well as bees, from the manner in which it disappeared.

The manner of making was described as follows: Put sugar sufficient to make what candy you need in a tin-pan with just enough water to dissolve the sugar nicely, more will do no harm, but it

must necessarily be evaporated again by boiling. Care must be taken that it does not burn, as burnt sugar is fatal to bees. Allow the syrup to boil until it begins to wax; test by dropping a little at a time into cold water. As soon as sufficiently cooked, remove from the fire; stir until the mass begins to turn white—to granulate, then pour into a plate to cool. If preferred, the candy can be made directly in a broad frame, to hang in the hive, by laying an empty frame flat on the table, or a flat surface, holding the frame well down to keep the warm candy from running under it as it is being poured in. We prefer to have ours in chunks or proper pieces, as we can then give only what is needed.

Various other interesting subjects were then discussed at some length, when the question of vice president was called up. After some discussion it was decided to nominate a vice president for each county, instead of for each congressional district, as heretofore. The list not being completed, the executive committee was instructed to fill vacancies and notify the appointees.

Mr. I. N. Cotton, being a member of the Legislature, said he would be pleased to recommend any legislation for the assistance of the association or the bee-keeping interest of the State, if any thing could be done, and, at his suggestion, a committee of three, consisting of Messrs. Daugherty, Schofield and Shaw, was appointed to look up the matter, with power to act, in connection with Mr. Cotton.

G. J. Brown, Anderson, Indiana, read "Bees and Bee-keeping."

The secretary was instructed to have constitution and by-laws printed, sending one copy to each member of the society. The association, by resolution, returned a vote of thanks to Secretary Heron, of the State Board, the Board of Agriculture and the daily papers for favors received.

There were on exhibition many samples of implements in modern bee culture, among which were two extractors and knives from C. F. Muth, Cincinnati, Ohio, and G. P. McDougall, this city; honey knife and smokers, from Bingham & Hetherington, Otsego, Michigan; Quinby's New Smoker and book, from L. C. Root & Brother, Mohawk, New York; A B C of Bee Culture, and Cook's Manual of the Apiary, from the Farmer. The secretary also had two hives, showing the different styles of taking comb honey, the different styles of sections, queen cages, candy, etc., all of which were much admired by the members.

The convention adjourned to meet at the call of the executive committee.

FRANK L. DAUGHERTY, *Secretary*.

TILE MAKERS.

The Indiana Tile Makers' Association held their tenth semi-annual meeting, in the rooms of the State Board of Agriculture, December 1 and 2, 1880, President J. T. Stringer, of Kokomo, presiding, and J. J. Billingsley, of Indianapolis, secretary. About one hundred and twenty-five members were present, with a number of visitors from adjoining States.

This is the pioneer association of the kind in this country, which has been imitated in other States, and it is questionable whether an association of any kind has been organized here that has resulted in more practical benefit to the State at large, as regards health and wealth. The association does not confine its object to the manufacture of tile, but through its influence, by essays and practical demonstration, prove the importance of drainage, the best modes, and, in fact, reduces the business to a science, and in order to secure the influence of the Board of Agriculture, and the confidence of the farming community, it was made part of their code in the early days of the organization, that no combination should exist in connection with the State Tile Makers' Association to regulate or control the price of tile. This feature has, no doubt, done much towards its success and influence, which has made the publication of a special monthly, "The Drainage Journal," necessary to meet the demand for such information. The tile makers, with an eye to business, subscribe for the Journal, fifty to five hundred copies each, and gratuitously distribute them among the farming community, thus becoming public benefactors. There are now four hundred and eighty-seven tile manufactories in Indiana, far ahead of any other State, with corresponding benefits. The proceedings of the last convention are published in full in the "Drainage Journal," from which we copy the following address on

BENEFITS OF FARM DRAINAGE.

BY PRESIDENT O. A. BURGESS, LL D., OF BUTLER UNIVERSITY.

Mr. President and Gentlemen of the Association :

Any man who teaches his fellow-men how to produce one more bushel of corn to the acre, one more apple to the tree, or how to prevent a single disease to which man or beast is incident, is a *benefactor to his race*. If this should seem at first blush a narrow basis on which to rest so proud a title as *benefactor*, we have but to estimate the sum total of the increase in production it would cause on the one hand, and of happiness on the other, to feel ourselves fully justified in the assertion. Benefaction to the race indeed rest primarily on small beginnings. The discovery of the circulation of the blood; the use of the small-pox virus, modified for vaccination; the discovery of the steam-power, the telegraph, the invention of spinning and sewing machines, are among the benefactions to the human race, but not more so than will be the well directed efforts of the farmer or associations of farmers who can accomplish what I have just indicated.

As I understand the objects of this association, you have in view no less grand results. You intend, by a judicious use of tile and drainage, both to increase the productive force of the soil and add to the sum of human happiness by decreasing liability to disease in both man and beast. This will lead me to discuss in your presence some of

The Benefits of Drainage.

Nothing is probably better understood among farmers than, as a rule, that *wet* soil is a *cold* soil. If a wet soil is a cold soil, and cold simply because it is wet, it is very easy logic to say—dry the soil and it will become warm. This, too, is always true in the case given. To drain a soil well, or rather to put it in condition of constant self-drainage, is, of course, the remedy for the wet and cold condition. It seems strange that so simple a process, though known and practiced centuries ago to a very limited extent, is but very recently claiming general attention, and being reduced to something like a practical and scientific basis.

Swamps, indeed, and stagnant pools and ponds of water have, of necessity, been carried away through drains, or more properly open ditches. But it has been reserved for a comparatively late day to successfully apply a system of tile drainage to almost all classes and conditions of soil.

The wet condition of the soil is, however, only a part of the problem. A wet soil is also a difficult soil to manage on account of the *baked* condition to which it is always liable under a hot sun. This renders it less friable, requires a vastly greater expenditure of labor and time to bring it into good farming condition, and produces less of grains or grasses after all the labor has been expended.

To dry soil by under-drainage is also, therefore, to remedy at one stroke all these difficulties, for a warm dry soil will seldom or ever bake, and is more productive than the cold and wet.

As this is a question of practical science, let us briefly examine a few simple laws on which the facts I have stated rest, and by which the results mentioned are brought about.

First. It is a well known fact in science that water is a powerful radiator of heat. This being true, all soils having, for a portion of the season, large quantities of surface water, must, of necessity, be deprived of a large proportion of the heat of the sun's rays, they being radiated by the water instead of being absorbed by the soil, as should be the case, and as must be before the soil will be warm enough to touch and quicken the germ-life of the seed sown or planted. Heat is one of the main conditions of life; and while it is possible to destroy life by overheating, it is equally certain that no very high type of life can either be produced, or after production continued, without a regular and constant supply of warmth or heat.

Second. But pools and surface water are not alone the enemies of production. It is also a well known fact in science that evaporation produces cold. Take the simple process of making ice cream, a luxury as easily produced in the suns of July as in the frosts of December. This is done by the use of the well known law of sudden and rapid evaporation carried on by the column of ice and salt outside of the column of cream, and by which the heat is withdrawn from the cream to so great an extent as to produce ice. I remember, when a boy, of seeing a newspaper statement to the effect that if a wet sheet be wrapped around a jug or tin vessel filled with water, and the vessel placed in the hot sun—the hotter the better, the paper stated—the water in the vessel would be kept cooler than any tree shade or hay-stack could keep it. Without asking after the philosophy I tried the experiment and found it true. The philosophy is now simple enough. The heat of the sun upon the wet sheet produced rapid evaporation, thus withdrawing the warmth from the water within, for as fast as heat is withdrawn from any body contiguous to another, the heat will pass from the other in order to keep up the equilibrium.

It is not difficult, therefore, to see how certainly a wet soil must be a cold one, since under the summer sun there must take place a constant and rapid evaporation of the surface water of the soil and a corresponding cooling of the surface must take place. When evaporation has progressed until the absorbent power of the earth is greater than the sun's rays, or so to speak, until the pores of the surface are closed, then commences the baking process so well known to farmers and so difficult to manage. Underdrainage is the simple and certain remedy for these evils, since by removing and keeping removed the surface water the soil becomes both dry and warm, which renders it also more friable, and in every sense easier to cultivate.

Third. Wet lands waste the manure, by not allowing ready absorption, the valuable parts of the manure frequently pass off in vapor, and are carried by the winds to enrich your neighbor's soil, who, by underdrainage, reaps the benefit of your labor as well as his own.

Fourth. There is also another method by which underdrainage changes the temperature and condition of the soil. The soil, as just shown, having been rendered more friable and porous, by carrying off the surface water, it is also in condition to allow the rainfall to pass easily and quickly through from the surface to the drain below. In this passage of the rain through soil and sub-soil, the heat or warmth in rain is carried downward and absorbed by the soil or sub-soil. As this absorbent force is always more effective in the ratio of the porousness of the soil, it follows that all the warmth of a summer's rain, instead of being wasted by radiation and evaporation, may, by a judicious system of tile drainage, be stored away in the soil below, and reappear in the increased quantities and improved qualities of the grains, grasses and fruits to reward and bless the husbandman for his toil.

Fifth. Well-drained lands will stand a drought better than wet lands. This will be apparent, when it is remembered that, during a large part of the season, moisture is supplied to the roots of growing crops by capillary attraction. In a hard, baked soil, this process is arrested, and thus the supply of moisture necessary for growth is cut off. Only a well-pulverized, porous soil, can give free play to the law of capillary attraction.

Sixth. Proper underdraining, by keeping a warm, dry surface, will prevent, to a great extent, if not entirely, that thing so fatal to some crops, called frost-upheaval.

Seventh. Experiments have shown that the temperature of fields lying side by side has been changed at a depth of 7 inches from 8° to 15° F. in favor of the one drained, and in the time of maturing

both grain and fruits, of from ten to twelve days. In this way have wet, cold, baked soils been transformed into dry, warm, porous soils, their productive power greatly increased, and at a much less expenditure of time and money.

Let us now observe some of the practical and valuable points gained: (a) security from early frosts; (b) the saving of labor and money in the management of the soil; (c) in increase in the products of the soil; (d) by saving all parts of the manure, a richer soil; (e) by early maturity of crops, better crops; (f) less liability of suffering by drought; (g) and less liability, especially in the case of winter wheat, of destruction of crop by the upheavals by spring frosts.

Thus far I have discussed the question before us specially with reference to grains and fruits. What I have said, however, will apply with equal force to grasses. Wet, cold land, whether used for pastures or meadows, will produce coarse grasses, mixed with weeds and often mosses. The grasses produced on such lands are not only coarse in texture, but correspondingly lacking in nutriment. That the flesh-fiber, or muscle that we call food, and eat under the names of beef, mutton, pork, etc., depends very largely on the food given to animals while fattening, is a well known and long established fact; but this has been related, unfortunately, to the little time set apart to "stall and fat the ox." A little observation will show, however, that in order to have a fine quality of beef and mutton for food, the ox and the sheep must be furnished with a fine fibered, nourishing feed, long before the special time for "stalling to feed" comes. Indeed, there should no such time come, and it need not, for the production of the sweetest and most nutritious animal food, if grasses of the finest fiber and fullest of nutriment be always grown in pasture and meadow.

In addition to the better quality of grasses produced by under-drainage, the health of the animal is also largely improved. Sheep are specially liable to diseases of both head and hoof.

It is now a well-known fact that domestic animals are subject to many of the same diseases which affect man. I do not see why this should not be so. Animal nature, in some respects, is substantially the same, whether it belong to man or beast. Other things, therefore, being equal, I see no reason why diseases should not be similar. Whatever improvement can be made in the conditions of the soil to guard against the diseases in beast, will also guard against some of the same diseases in man.

But more of the health question hereafter. I wish here simply to emphasize the fact that dry, warm, healthful lands are not only necessary to the production of grasses of a fine fiber, full of nutriment, but equally necessary to the production of fine, large, healthy

cattle and sheep; and that, as an economic measure, it will find its justification and reward in the increased value of these animals, whether for the market or our own table use.

A few other practical suggestions now arise, upon which I shall offer a mere suggestion as your own observation and experience will serve you far better than anything I can say.

The first relates to the kinds of land that should be drained. In a generally level country, my own observation is that one can drain to advantage any soil. The clay soil, of course, offers the most serious objections, and yet I apprehend the trouble with clay soil, lies not so much with the failure of the drain as with the attempt to handle the soil *too soon* after a rain. Clay, for reasons very obvious, needs a longer time to drain than soil of a less compact character. If the plow be put in too soon after a rain, a kind of a paste is formed, which will be certain to become baked as soon as the sun shines hotly upon it. A little waiting, however, and it will be found that the water will make its way to the drain, and the clay become comparatively warm and friable.

The depth and distance apart at which the lines of tile should be laid, as well as the size of the tile, are all questions of importance, but questions not to be settled in any very dogmatic manner. General observation and experiment, so far, seem to assert that quite a depth—say four feet—is desirable, and the lines of tile tolerably close to each other. These are questions, however, it seems to me, that must be settled by the general condition and surroundings of the land to be drained. One thing I may state that is quite apparent: it is that the final *outlet* of drainage will largely modify all these questions. If that outlet be a large and quick discharge, and if the several lines of tile leading to it are of quick and regular descent, then will each line of tile *draw* a greater distance, and therefore fewer lines will be needed. If the land in general be quite level, and all outlets sluggish, each particular line of tile will carry off less water, and will drain a correspondingly less area. All in all, actual experiments are the best teachers on points like these, and experiments that are not costly, and when successful, yield rich fruits, can be carried on with patience and energy.

Aside from the advantages arising from, and the interests fostered by, your association, thus far stated, I must not fail to note the great economic values, in part, or in whole, created by you. I refer to the stimulus added to the incentive genius of our country, and the facilities afforded thereby to make your work swift, easy and effective.

It is said "the Yankee not only makes the thing, but makes the machine that makes it." Even so; for no sooner did the attention

of farmers become fairly addressed to the subject of tile and drainage, than scores of inventors were at work to produce the machines by which the work could be carried on. You have thus become the foster-fathers of a new industry, and have thereby made a positive addition to the resources of the country.

The following, taken from that admirable collection of State statistics, by Prof. Collett, will serve to show something of the value to the State of this new industry: "In Indiana, alone, there are three hundred establishments for the manufacture of tile. These employ a capital of over \$500,000. They use \$100,000 worth of raw material, producing over \$600,000 worth of manufactured material, and pay about \$200,000 for wages."

I may add that this shows but the beginning of an industry that is yet destined to take first rank among the productive forces of our great State, without any immediate danger of a lack of room. Indiana contains about 22,000,000 of acres. Only about one half of these are at present in a state of cultivation. Of the millions under cultivation, it is safe to say that not one half have yet reached anything near their maximum productive force. The proper use of manure above, and drains below, would soon double the already enormously large productions of the State. Add to these, the millions and millions of acres not yet touched by the plow, and we may indeed say, Indiana is an empire in herself, and capable of furnishing bread for the world. How much of this shall be realized; how many of the now unturned acres shall yield to the ax and the plow; how many death-breeding swamps and stagnant pools shall yet yield sweet incense for the altar of the farmer's devotions; how much of "the wilderness shall yet be fragrant, and blossom as the rose," will depend largely on you, gentlemen, and your and kindred associations.

I can not close without a word further upon a subject already hinted at,

The Question of Health for Man.

You are not simply draining lands to add to the quantity and quality of your crops, or to place your lands in a condition to be tilled by the least possible expenditure of time and means. These would be, indeed, commendable objects, and might well engage your earnest and constant attention. But you do more than this; every farm well drained has gained a partial, if not entire, immunity from certain diseases; and every farmer who builds him a home, where he may eat and drink and repose "under his own vine and tree," on well drained land, takes thereby an extended lease of life, and adds security to the happiness and health of wife and children.

Eminent physicians in different parts of our country estimate

that from one-fourth to one-third of all human diseases arise from a lack of proper drainage. Here, in the west, we know full well how certainly ague and fever, chills, billious and typhoid types of fever, and malarial types of disease in general, follow in the wake of miasmatic vapors, exhaling from pools and swamps and excess of surface water.

If, therefore, gentlemen, while you are enriching your lands and adding to the general prosperity and wealth of our great State, you shall also take away the sources of disease and oftentimes death, you will have reduced farming to a science that will deserve to rank among the learned professions, will have added to the sum of human happiness, and will deserve, as you will receive, the benedictions of all who share your generous labors or enjoy the fruits of your noble toil. I bid you God-speed in a work that strives for the attainment of such grand ends.

FISH CULTURE.

The encouragement given to fish culture by the General Assembly of the State of Indiana, at their recent session, by the enactment of a law creating the office of Fish Commissioner, and appropriating funds for that purpose, has awakened an interest in that branch of industry, and information on the subject is sought for, as never before. Hence we present herewith some articles from the highest authority on the subject, gained by practical experience in fish culture, to aid those who are disposed to embark in this profitable and pleasant business.

It is a conceded fact that Indiana, with the numerous ponds in the northern part of the State and sink-holes in the southern part, and well watered by rivers and streams, has equal, if not superior, facilities for fish culture to any other State.

FISH CULTURE.*

BY SETH GREEN, ROCHESTER, NEW YORK.

Fish can be raised with less trouble and cost than other articles of food. The lakes and rivers are full of animal and vegetable organizations upon which fish can live, now wasted, but which should be utilized by stocking these waters with suitable varieties. There is not only an abundance of food, but it is also true that fish need less food to produce a given amount of flesh than is required by birds or quadrupeds. The amount which makes a pound of poultry or beef will make many pounds of fish; this is owing to the fact that they are cold-blooded and usually inactive animals. When we see them in water they are in motion because they see us; at times they go long distances in search of breeding places, but they are, as

* From the Journal of the American Agricultural Association.

a rule, quite torpid in their habits. Animal action consumes the system. For this reason, those who wish to fatten cattle or poultry keep them confined. Animal heat is also a great consumer of food, and a large share of all that is eaten by warm-blooded animals is needed to maintain this vital heat. As fish are cold-blooded, they need but little food for this purpose, and most they take goes to make bulk and weight. The fact that this class of animals will live a long time without eating is familiar to all. There is but little waste to their system in any way. We frequently see birds and fishes kept in the same rooms; while the first are restless and need constant care and feeding, and frequent cleansing of their cages, the latter are almost motionless unless disturbed, and as the water in which they are kept is usually clear and fresh, it has in it but little food. It may be true that a pound of fish does not contain as much nourishment as a pound of beef; but the difference is by no means as great as the difference in cost of production. For some purposes of health it is much more valuable than a like weight of other food. Less care and labor are needed to raise fish than to raise other animals, or even to raise vegetables. We must give close attention to our flocks and herds throughout the year, and we must toil through a long season in our fields to make vegetables grow. Lakes and rivers are said to be like fields prepared for food. Fish only need our help in one way. At breeding times their eggs are mostly destroyed by numerous enemies, and but few are hatched.

By artificial means, at a trifling cost, nearly all the eggs can be saved and vast numbers of young can be produced.

While on this analogy it may be suggested that rotation of crops may be as advantageously introduced in pisciculture as in agriculture. In a portion of France, where the land is low and can be overflowed at pleasure by a system of dyking, crops of grain and eels are alternated, the latter being the most profitable; but this is only the germ of the true principle. When one sort of root or grain or vegetable is repeated on the same land it is found that the soil is exhausted of its food, while its enemies are augmented in number.

Incidentally, the same thing occurs with fish when they are kept in one locality. They use up their food and increase the list of their foes. As soon as this happens they suffer and should be supplanted by a different species, living on different food and having a totally different class of enemies. Wherever this has been done the effect has been surprising, the new species increasing enormously for the first few years, then meeting the fate of their predecessors. It is a curious fact that the stomachs of fish are so often found to be entirely empty of food, and the migratory varieties seem hardly-to

feed at all while preparing to spawn. This would imply either that they digest very rapidly or can go a long time without nutriment, and probably both of these deductions are true. Heat and motion are the main consumers of food, for animal bodies are physically machines which must be supplied with fuel if motion is to be generated, and will wear out with friction unless the waste is restored. A man or a horse can only perform his quota of work if his body is thoroughly nourished, and on the other hand, neither needs nor can digest his full amount of food unless he works. The terrestrial animals are warm-blooded and active, many of them in their natural state getting their food by the chase, whereas fish are cold-blooded and although occasionally making long journeys, are ordinarily quiet.

The following points upon fish culture seem to be established First.—Fish culture, extending to every desirable variety of fish, is entirely practicable. Second.—It may, under proper management, be made profitable to the producer, as much so or more than the cultivation of land or of land animals, and on similar conditions. Third.—It may furnish to all classes an abundance of cheap and the most nutritious and healthful food. Fourth.—It is absolutely necessary, in order to the preservation of the fish in the country from total destruction. Fifth.—Every section of our country, and all its creeks, rivers, lakes and sea coasts are available for this care being taken, that the right kinds of fish be selected for the waters into which they are placed, observing latitude, climate, temperature and quality of water. Sixth.—It may be carried on by stocking waters with young fish brought from hatching establishments, or by obtaining eggs for hatching, and both eggs and young fish may be transported safely to almost any distance. Seventh.—The money capital required for these operations is small; skill, care, patience, perseverance and common sense, the same as in other business, being the chief requisites. Eighth.—Individual enterprise is alone sufficient for success, though State action is desirable; indeed, legislation is essential, if not to foster, at least to protect those engaged in the business of fish culture.

THE PROPAGATION OF VARIOUS KINDS OF FISH, AND THE WATERS IN WHICH THEY WILL THRIVE.

[SETH GREEN IN NEW YORK TRIBUNE.]

Many people seem to entertain the idea that our game fish are not food fish, and that the work of the Fish Commissioners has been

confined almost exclusively to the propagation and increase of game fish. The fact of the matter is that our better class of fresh water food fish is composed principally of game fish.

It costs no more to cultivate a good variety of fish than it does an inferior one, and I am sure the people would rather live on beef than liver, especially when one costs no more than the other.

Some waters are not calculated to produce the best varieties of fish, and it is therefore impossible to stock such waters with anything but the more common kinds. For instance, some persons write me that they have a small lake in their vicinity, perhaps a mile or two long, and proportionately wide, principally muddy bottom, and containing flags and pond lilies, and they wish to stock it with black bass.

My reply is that black bass will not do well in such water, for the reason that it does not answer the requirements of their nature. They require clear, bright water, with a rocky bottom, and crawfish for food; also a larger territory for their increase, as in water suitable for them they multiply rapidly. They thrive best in large, clear lakes and swift rocky rivers.

For such waters as described above I would recommend yellow perch and bull heads, and if it contained both of these varieties, and it was desired to put in another kind, I would advise Oswego bass, a fish closely resembling the black bass in appearance, but differing greatly in habits and other particulars.

I am frequently called upon to furnish salmon trout for small lakes, rivers and creeks. I have tried the experiment many times of putting them in such waters, but they have invariably failed to thrive. The only waters they do well in are clear water lakes having a depth of not less than one hundred feet. They are strictly a deep lake fish. In shallow lakes the water gets too warm for them, and unless they can have access to the deep cold water beyond the penetrating heat of the sun, they will surely die.

CARP CULTURE.

The introduction of the German carp in this country is a matter of special interest and importance to all inland communities that heretofore have experienced a dearth of fish food, for the carp will thrive in either artificial or natural ponds, having muddy bottoms, with almost no care at all.

The special merit of the carp lies in the fact of its sluggishness, and the ease with which it is kept in very limited inclosures, it be-

ing a vegetable feeder, and its general inoffensiveness. Trout and black bass require a supply of animal food for their sustenance and growth, but carp, while not disdaining flies, worms and the like, thrive on the succulent roots, leaves of aquatic plants and their seeds. They also readily feed upon corn, grain, bread, root crops, raw or boiled, and, indeed, any vegetable refuse whatever. They thrive best in ponds with muddy bottoms, and whenever the water becomes cold or frozen over at the surface, the fish bury themselves in the mud, congregating in lots of from fifty to one hundred, and constituting what is called in Germany "kettles." It is important that they should not be disturbed under such circumstances. Of course, while hibernating in this way, they are not feeding, although it is said they do not lose appreciably in weight. In the more southern regions, where the waters do not freeze, they will doubtless feed throughout the year, and make a more rapid growth.

As regards the best plants for a carp pond, the United States Fish Commissioner mentions the ordinary pond weeds—splatter dock or pond lily—and, indeed, any of the kinds that grow in the water, with leaves floating upon the surface, duckweed among the number. Those producing seed, like wild rice, are especially desirable. In large ponds, it may not be necessary to give special food, but in restricted inclosures, they may be fed with the refuse of the kitchen, garden, leaves of cabbage, lettuce, hominy and other substances. When grain is fed to fish, it is better boiled. A good plan is to have the ponds arranged so that the water can be drawn off at will, leaving all the fish collected in a small basin near the outlet. This is for the convenience of assorting the fish and selecting such as may be required elsewhere.

Carp spawn in May and June, and, under some circumstances, throughout the entire summer. They are very prolific, and the eggs of the female adhere tenaciously to whatever they touch; for this reason, it is important that a new pond be provided with floating weeds for such attachment. The eggs hatch out in a few days, and the young grow very rapidly. A Nevada exchange, in illustration of the prolificness of carp, cites the experience of Mr. Moshier, of Stockton, who, from seventeen young carp, gained in one year 5,000 carp, from five to seven inches long. His pond was seventy feet in diameter and six feet long. The bottom and sides of the pond were cemented, to render water-tight. The water was supplied from a well seventy feet deep; it was pumped into the pond by means of a windmill. The cost of this pond was \$100. Farmers who feel interested in growing carp, can, of course, raise all that would be required for family use in a much smaller pond than the one described.—*The New York Weekly World*.

FISH CULTURE.

It may surprise and pique our readers to inform them that an acre of water well stocked with fish will produce as much food as an acre of land. The process of stocking our waters with fish is being carried on by various bodies in various ways. Notable among these is the work done by the United States vessel, *Fish Hawk*. This has a capacity for hatching 20,000,000 young shad at one time, and, as the hatching process occupies about five days, the capacity is about 120,000,000 a month. The intention was to commence on the Georgia coast in February and finish with the Susquehanna in June, giving four months to the business, which would have produced at least 400,000,000 young shad, enough to stock the continent. This plan was frustrated by the unusual lateness of the season which put off operations till the middle of April.

The process is curious but simple. When the immense seine is drawn ashore, a skillful man called a "spawner" wades along, ankle deep in fish, selecting roe shad that are ripe. These are taken to the spawn pans, and the sides gently but firmly stroked with the thumb and fore-finger, much after the fashion of milking. The act is called "stripping." The roe, if ripe, yields the spawn freely and the result is several spoonfuls of eggs, each about the size of a pin head. A buck shad is then produced and milked in the same manner. The milt is made to flow into the pan until about a spoonful is yielded. Then a little water is added and the pan shaken gently until the milt has touched all the eggs. In a few moments the mass of eggs swell to twice their size, each egg becoming a tight round globule. In this business nature is beaten at her own game, for in nature, it is said, not more than one-third of the eggs are vitalized, whereas by this process scarcely any fail of being impregnated. A ripe shad yields from 20,000 to 40,000 eggs, although the number is said to have gone up to 70,000. The pans with the spawn are taken aboard the ship and their contents gently poured into cones filled with water. In these cones the proper temperature is maintained and a gentle, aerated current kept up by force-pumps. In these cones the eggs are proof against untoward accident. Whereas in their native hatching grounds the eggs are subject to change of current, washings, and sudden chill in the water, in the artificial receptacle they are free from all adverse circumstances, especially from the shoals of small fish that haunt the vicinity of the developing eggs. The result is that ninety per cent. of the eggs are hatched out, whereas in the natural manner, only one-third of the eggs are impregnated and only one-fourth of these hatched out.

The course of the fish can be traced without the aid of the microscope. The globe grows perceptibly from the first, and in four or five days is an unmistakable fish. Then the creatures break the globes in which they are contained, but the yolk-bag, twice the length of their body, hangs to them some time longer. Until this is absorbed they are in a critical situation, in the natural state being at the mercy of the swarms of minnows that haunt their tracks. In the cones they are protected from these marauders, hence the large percentage of those which survive. When taken from the cones they are packed in cans and sent to the fish commissions of the several States. A sharp eye can easily determine when to empty the cones and fill them with a fresh supply of vitalized eggs.

With the present facilities for hatching, the only limit to the production is the quantity of eggs taken. However, it is apparent that enough will be produced to stock all the rivers of the country.

The effect of the hatching is already perceptible in the largely increased catch along the Atlantic coast. On the North Carolina coast the catch was increased tenfold the first year after the use of artificial hatching. The movement in fish culture will not rest with the shad, the attention of the *Fish Hawk* will be turned toward the fine Spanish mackerel and the prolific rock. By steering to different points, the *Fish Hawk* may find employment in her peculiar business for every day in the year.—*Prairie Farmer*.

OUR FIBER INDUSTRIES.

BY CHARLES R. DODGE.

How to frame tariff laws to enable successful competition with the old world, has been the study of political economists and protectionists for long years, and now the spectacle is presented to our view of a people trying to compete with themselves, or to state it more plainly, the older sections of the country are finding themselves unable to compete with other sections where farming is conducted by steam machinery, and upon the grandest scale. The center of wheat production is rapidly moving westward, as each year opens new farms in the far west, where capital, with gang plows, headers and steam threshers, grows more grain upon one farm than is produced in a whole county in the east, and at prices, too, discouraging to the eastern agriculturist or western small farmer. The center of wheat production, in twenty-eight years, has traversed 430 miles of territory, from eastern Ohio to central Illinois, and is still moving westward. The eastern farmer can not afford to grow wheat. Sheep and cattle, even, can be more profitably produced in the west, and a "diversified agriculture" generally means growing what everybody else is growing, at bottom prices. It should mean something else. Without discussing the merits of either free trade or protection, everybody knows that a dollar paid to an American farmer is better for American agriculture than to send the same dollar out of the country. If our farmers can not all grow wheat for foreign export, perhaps something else can be grown that now must be imported. Already farmers in the eastern States are turning their attention to sugar-beet culture, capital having supplied a market for this product; but beet-sugar and sorghum sugar are no less elements of national wealth because furnishing a home supply than are vegetable fibers. But fiber cultivation is no new thing. It is an old industry—old as the country itself—which has only languished in late years through neglect, the causes of which can be readily explained.

Early Flax Culture.

As early as 1629, flax was grown in Salem, Massachusetts, by one Samuel Cornhill, and in February, 1640, flax was ordered by the General Court of Connecticut, to be sown by each family, to preserve seed. Later, flax culture was extended into other colonies, and flaxseed was early exported to Great Britain. In 1751, it is recorded that sixty wagon-loads of flax were received at Baltimore, from the surrounding country, for shipment. According to Mr. A. J. Lawson, the first flax-dressing machine used in this country was constructed in 1753, by Hugh Orr, Bridgewater, Massachusetts.

Next to Cotton and Wool.

The flax industry of the United States stands third on the list of fiber products, although the production is far below what it should be. In 1850 nearly 7,700,000 pounds of raw flax were produced in the whole country; in 1860 there was a falling off of nearly 3,000,000 pounds; while in 1869, according to the census of 1870, the product arose to over 27,000,000. Of this quantity, Ohio, New York and Illinois produced over 87.5 per cent., Ohio alone growing, in round numbers, 17,000,000 of pounds, New York ranking next in amount of production. The present area in flax can only be roughly estimated at 400,000 acres. There has been a considerable falling off in the Eastern States, but this has been more than made up by the increased acreage in the west. The five States of Ohio, Indiana, Wisconsin, Iowa and Kansas, had about 250,000 acres in flax, in 1877. The 17,000,000 pounds produced in Ohio, in 1869, fell off 10,000,000 in one decade, the figures of 1879 giving but little over 7,000,000 pounds, as the product of that year. While there has been a falling off in lint, the seed figures throughout the west show an enormous increase, especially in Kansas and Iowa. In 1869 Kansas produced 1,553 bushels of flaxseed, and Iowa, 88,621. In 1877-78 their production amounted to about 291,000 and 530,000 bushels respectively. The present census will show large figures in seed production, though it is doubtful if there has been any great increase in the amount of lint produced. The crop of 1870 was grown in twenty-eight States, New Jersey, Pennsylvania, Kentucky, Michigan, Minnesota, Oregon and California, in addition to the States previously named, furnishing the great bulk of the supply.

The Foreign Supply

Is derived mainly from six or seven countries, some twelve or fifteen countries only being represented in the imports of the last ten years. Since 1877, Russia has furnished by far the largest amount,

England coming next on the list, though doubtless a part of this is re-exportation. In 1879 Russia furnished 1,156 tons, valued at \$338,457. The remainder of our foreign supply was received as follows: From England, 613 tons; Scotland, 364 tons; Ireland, 299 tons; Netherlands, 35 tons; Belgium, 10 tons, and from our neighbors over the border, 458 tons of Canadian and Northwest Territory flax.

According to estimates of leading New York and Boston manufacturers the imports of 1879, for scutched flax, line and tow, amounted to almost seven millions of pounds, costing from \$300 to \$550 per ton. The total valuation of this import is \$969,451.

As has been stated, Russian flax largely supplies this demand. Dutch flax—at one time considered the most perfect flax in the market—is used only in small quantities, and Belgium furnishes a still smaller amount. Of Irish flax, 59,500 pounds were received at the port of Boston in 1879, together with 87,000 pounds from the Netherlands.

After reviewing the sources of our supply, domestic and foreign, the question of quality arises as an important factor in determining from whence the bulk of raw fiber must be received by our manufacturers. Naturally aiming to produce as high a standard of goods as can be made abroad, they will buy the best fiber in the different grades that can be obtained for the money. As regards our ability to produce flax in any quantity, there is no question; it must be up to a higher standard of quality than at present, however, if we wish to compete with that grown in the best flax producing countries of the old world. Flax culture in Russia has grown to be such an enormous industry, that a million acres of land, it is estimated, are required for the production of flax fiber alone, 80,000 tons of which on an average, have been exported for a series of years. The quality, doubtless, is not as high as in some other countries, but the flax is carefully graded by a government standard, by government officers, and its quality carefully designated; the fiber is put up in even lengths, and the manufacturer always knows just what he is buying. Here there is no one standard, each dealer or producer fixing it to suit his own ideas. The system of culture in this country is against high grade fiber. More strength is needed by improved methods of treatment, and more attention to evenness in length is absolutely essential. The majority of our farmers "haven't time" to grow good fiber—and it takes time and labor—preferring to follow a haphazard system of agriculture which can only give in-different results.

Foreign Methods.

The Irish and Dutch growers sow thick for fine fiber; the crop is carefully watched and studied that everything shall be done in just the right time, and this watchfulness and care commences with the very preparation of the soil and the selection of fertilizers. Rotation of crops is closely studied; the seed is most carefully selected, and after the plants have begun to show themselves they are kept free from weeds. The greatest care is exercised in harvesting the crop and in the steeping and rotting of the straw—the system of water-rotting always being pursued instead of the dew-rotting, as practiced in this country. Even at this stage the crop requires the closest attention; it must be taken from the steep pools at the proper time; it must be guarded from injury in drying and stacking, and finally care must be exercised in the separation of the lint from the woody portion or “shive.” The wasteful system usually practiced with us would ruin the industry in any flax country in a few years.

In this country flax is grown largely for seed, which, of course, is sold to the oil factories. The straw is either burned or otherwise wasted, or is sold in limited quantities to such bagging factories as can find a market for their goods. The entire crop is, therefore, taken right out of the soil, so to speak, and nothing returned. The mineral elements extracted from the soil are contained in the seed and woody portions of the plant, while the fiber or lint takes its constituents from the air. Abroad, these important elements of fertility are returned to the soil in various ways. One of the most profitable ways in which the fertility is kept up, is the feeding of the oil cake to cattle, making at the same time beef, and fertilizing material of the highest value. The contents of the “steep pools” serves to irrigate the fields, and even the “shive” or waste portions after scutching are composted and returned to the land. Under such a practice, flax can not be called an exhaustive crop, as is claimed for it by some producers.

It is true, we have not so moist a climate as that in which the Irish and Dutch flax is produced, but we can, nevertheless, with proper care and the adoption of foreign methods, grow fine flax in many portions of the country. Oregon and Washington territories are especially adapted to the growth of superior flax, and even in New England, northern New York and the lake region, good results may be attained.

Waste of the Fiber.

In glancing at the figures of area given above, it may be suggested that four hundred thousand acres in flax must mean a pretty heavy

fiber production, in spite of all these drawbacks and deficiencies. What becomes of it all? The Western farmers themselves state that the great bulk of the crop, the product of thousands of acres, is wasted after the seed is removed. It is true that the plants as grown for seed make poor fiber, and it is even claimed that good fiber and good seed from the same plant is an impossibility. A double crop, if such it may be called, has been obtained, however, by pulling or harvesting when the fiber is in the best condition, allowing the seed to ripen afterwards upon the straw. If Western flax-straw, after the removal of the seed, is unfit for fine fiber, it is useful for the manufacture of tow for paper making, and, for coarse bagging, and the question may suggest itself: Why then is it wasted? To this, the Western manufacturer makes answer that it was not wasted until Congress, eight or nine years ago, took off, or greatly lessened the duty on jute butts, in consequence of which the flax bagging establishments—which, with hemp, furnished the greater part of the bagging in use ten years ago—were obliged to suspend operations. They ask for a higher rate of duty on jute butts, and promise to furnish from western flax, now grown for seed only, all the bagging that can be used for cotton, wool and grain. They claim to be able to furnish it at the prices jute bagging now commands, and that, too, from a material now almost wholly wasted.

On the contrary, the jute manufacturer claims that it is true national economy to admit raw material free of duty in order to encourage manufacture at home, instead of importing from abroad. Then the Western farmer and flax-miller reply that if it is good to give employment to American labor in the manufacture of bagging, it is still better to give employment to American farm labor in producing the raw material. So evenly balanced are the forces in this conflict, that flax is still able to compete for a portion of the bagging used in baling the cotton crop. Through larger capital, with better organization and division of labor, the jute manufacture is successful and the flax-bagging industry depressed. The conflict is between the seaboard and the interior, between the large manufacturer on the one hand, and the small flax-miller and farmer on the other. Logically the flax men have the better position if they can make good the promise of a full and cheap supply; the jute men, however, have the advantage of having produced the supply.

Whether flax is, or not used for bagging, the

Growing of Fine Flax

Is open to our farmers, and a good quality of fiber will find a market. Better methods of growth and "handling" however must be

introduced before we can expect to compete with foreign producers. This may not be accomplished in one year, or in two or three, for skill and experience only come with practice, but the American farmer has intelligence on his side, and falling back upon his native energy, and inventive genius, is bound to have an advantage in competition with foreign low priced labor.

American dressed flax is used more or less in all kinds of manufactures, although the general verdict seems to be that goods from foreign fiber are in every way superior, and command the highest prices. Foreign flax of equal grade with American costs one-third more, and even Canadian flax brings a higher price from its better color, and "better handling" which renders it finer and softer to manipulate. A manufacturer of crash in Eastern Massachusetts, makes a difference of one-half cent per pound in favor of American flax, because it is better and stronger than the grades of Russian, generally used in his establishment. This would seem to show that the best American is only worth half a cent more than an inferior grade of Russian. The flax crop of 1879 was poor and the yield small, consequently there was more demand for the foreign product. Notwithstanding, the imports of 1879 show a falling off in value to the amount of several hundred thousand dollars, the imports of 1878 reaching considerably over a million dollars in value. This is accounted for through foreign depression, which caused our linen markets to be flooded with manufactures from abroad which were sold at the best price that could be obtained.

Our Native Hemp Supply

Is principally derived from Kentucky and Missouri, these States having produced it for a long period. As early as 1842, Kentucky produced over 15,000 tons of hemp. In 1850 the production was nearly 18,000 tons, and in the next ten years this amount was very nearly doubled, while in 1870 the product had fallen to 7,777 tons. Missouri in 1850 produced 16,000 tons; in 1860, 17,000 tons, and in 1870 but 2,800 tons, and in the same year, four other States: Tennessee, Pennsylvania, California and Illinois produced about two thousand tons more. Since 1870 the production of Kentucky has slightly increased, though at no time has it been over 8,000 tons. The present increase doubtless is much greater while in Illinois and some of the Western States producing only small quantities there will be a decided change in the figures of ten years ago.

The Foreign Hemp

Is principally derived from Russia, Italy furnishing a small quantity of a fine grade of fiber. An eastern manufacturer, of long

experience, in speaking of quality, states that American hemp is of greater flexibility than the Russian, consequently, cordage made from the latter stretches less, and has been generally preferred for stays and shroudings for a long time. On the contrary, Russian hemp can not be dressed so fine as the American and this, with the greater cheapness and equal strength of the latter, has almost driven Russian hemp from the market, very little of it having been used for some years past. The crop of 1879 was not sufficient for the demand and manufacturers have been compelled to again import largely of the Russian. Regarding the extent of the crop of 1880, I can give no figures but from the amount of seed planted last spring in Kentucky, and the area placed under cultivation, it must be considerably in excess of recent years. At one time it seemed as though the Kentucky farmers were going wild over hemp, as seed was purchased and ground rented at highest rates, with a prospect of large returns. The increase in area was due largely to the high prices of Kentucky hemp in the early part of the year, and perhaps to the published statements regarding the enormous demand that might be made upon hemp producers for material for twine to use in the grain-binding machines.

It is not likely that Kentucky, in the immediate future, will reach the production of past years. Hemp manufacture has declined in the State, and now hemp cultivation is extending to other portions of the country, particularly westward. The introduction of Manilla hemp, too, has had much to do with this falling off in production, jute has also supplanted it, to a certain extent, in bagging manufacture, and to a slight degree for the manufacture of cordage for inland purposes.

Mr. John R. Proctor, of Frankfort, Ky., who has a thorough acquaintance with the hemp industry of his State, is of the opinion that there is a

Great Future for this Industry,

As there will be an increasing demand for hemp from year to year. It will, however, be a demand for a finer grade of hemp, for spinning into yarns, fine twine, and even crash and toweling, instead of bagging, as in former years. During the last year there has been a considerable demand for hemp twine for use in grain-binders, mentioned previously, iron and wire having advanced so materially as to make twine cheaper. Then, too, there are objections to the use of wire, which, with the cheapness of the fiber, may subsequently lead to the universal use of twine, creating a large demand for hemp or flax to supply this industry alone.

Whatever may be the future of hemp culture in this country, the same remarks that were made concerning flax will apply

equally well here. The farmer who wishes to succeed must go into fiber production coolly, with his eyes wide open, making use of everything that will save him time and money and aid him in producing the best results. The man who rushes pell-mell into the business, trusting only to luck and high prices, growing the crop because it is popular to do so, to use a homely expression, will only burn his fingers for his pains. There is altogether

Too Much Carelessness

In American agriculture, but there is a good time coming when the "science of the thing" will be better understood, when a farmer to be thoroughly successful will be obliged to go to the bottom of things, and use his brains as well as his muscle. When such an era has dawned we can grow flax and hemp for profit, and through practice gain experience and skill which will enable us to compete successfully with the old world.

Other Fibers.

The reader may ask "What about ramie and jute and other fibers of which so much has been written from time to time?" Well, ramie, can be successfully cultivated, and, too, as far north as the State of New Jersey—and, furthermore, a machine has been made in Newark that will strip the fiber from the stock successfully and economically. That is the present status of the ramie question in brief. To find a market for the prepared fiber, however, is another matter.

There is no market now, and no manufacturer seems disposed to change his system of machinery with the present small supply, in the hope of creating a demand for a larger quantity. Mr. LeFranc, of Philadelphia, tells me that the woolen system seems best adapted to the manufacture of ramie, and as woolen manufacturers have all they can do in working up an established textile we can not expect much for the present. Perhaps the farmers themselves may be able to start the ball in motion by producing the fiber in such quantity as will induce manufacturers to open a market for it. Something has already been done in this direction. The State of New Jersey, with a view to the encouragement of fiber industries last season passed a bounty bill, by which the farmers of the State receive a premium for every ton of stalks and pound of fiber produced. The bill not only includes ramie, but flax, hemp and one or two other plants.

The question of India jute cultivation I am not prepared to discuss. That the plants will grow and flourish in the Southern States

has been demonstrated, but nothing has been done recently, looking towards its production as a source of revenue to farmer or planter, in the near future. There is a plant, however, known throughout the Western States, which can be grown with success, if farmers would turn their attention to it. I refer to the

Abutilon Avicennæ,

Which has been recently cultivated experimentally in New Jersey, under the name American Jute (which certainly is a misnomer).^{*} The plant grows wild from the seaboard to the Mississippi, if not farther to the westward. It thrives on corn land, producing a long fine fiber suitable for many purposes for which hemp, and flax even, are employed. Mr. Angell's ramie machine, previously mentioned, is adapted for stripping this, as well as other vegetable fibers of similar growth.

There are a number of plants belonging to the *Hibiscus* growth which might be utilized for fiber with profit, and which would have been utilized in such a country as France, years ago. The swamp-rose mallow is the most prominent example, experiment having already proved its value and utility.

Farmers will do well to look into this question of fiber production. You can not all grow the same product, and make money out of it, whether it be wheat, sugar beets or wool, but you can study your own interests by adopting a system of diversified agriculture which will always insure something when prices of main products are "way down."

^{*} In a recent letter from Prof. S. Waterhouse, of Washington University, St. Louis, the name "Bute" is proposed as a popular appellation for this fiber producing plant. The name is short and distinctive, and would not confound the plant with the India jute as the case at present, notwithstanding the prefix "American."—*Indiana Farmer.*

NEW LAWS.

FISH LAW.

AN ACT to authorize the appointment of a Commissioner of Fisheries for the State of Indiana, defining his duties and making an appropriation to defray the expenses thereof.

[APPROVED MARCH 26, 1881.]

SECTION 1. *Be it enacted by the General Assembly of the State of Indiana*, That the Governor, immediately after the taking effect of this act, shall appoint a suitable person (who shall be a citizen of the State of Indiana) to discharge the duties hereinafter prescribed, who shall be known as the "Commissioner of Fisheries," and who shall hold his office for two years, subject to removal by the Governor for incompetency or other cause, that would render him an improper person to longer hold the office.

SEC. 2. It shall be the duty of said Commissioner to examine the various lakes, streams and water courses in this State, and ascertain whether they can be rendered more productive in the supply of fish; also what measures are desirable and expedient to effect this object either in propagating and protecting the fish, that at present frequent the same; or, in the selection and propagation of either species of fish therein, (or both); said Commissioner shall also inquire into and test the best modes of the artificial propagation of fish in the various waters of the State, and shall procure and superintend the procuring of the fish, fish eggs or spawn, as shall be necessary, for said waters, and the propagation of the same therein.

SEC. 3. It shall be the duty of the Governor to fill any vacancy in said office that may occur by reason of death, removal, or otherwise.

SEC. 4. That there be, and is hereby, appropriated out of any moneys in the State treasury, not otherwise appropriated, the sum of *two thousand* dollars, to be expended under the direction of said Commissioner for the purposes aforesaid, and in paying all neces-

sary expenses incurred by him in the discharge of his duties as such Commissioner, which sum shall be paid to him by the Treasurer of State, on the warrant of the Auditor of State, and which warrant therefor shall be issued on the certificate of said Commissioner that the same, or any part thereof, is necessary to carry out the objects and purposes of this act.

SEC. 5. Said Commissioner shall, before any warrant is issued to him for any money from the State treasury, execute to the State of Indiana his bond in the sum of *two thousand dollars*, with one good and sufficient freehold surety, resident in this State, conditioned for the faithful performance of the duties of said office, and proper expenditure of all moneys that may come into his hands as such Commissioner, which bond shall be subject to approval of the Auditor of State and filed in his office.

SEC. 6. Such Commissioner shall report the result of his investigations, experiments and labors to the next General Assembly succeeding his appointment, which report shall also embrace all necessary suggestions and recommendations he may deem proper to increase the efficiency and value of fish culture to the citizens of this State.

SEC. 7. That said Commissioner shall have and receive for his services the sum of *three hundred dollars*, to be paid out of any money in the State treasury not otherwise appropriated, in quarterly instalments, on the warrant of the Treasurer of State, in the same manner and upon the same vouchers as other officers of the State are paid, and the same shall be all the compensation that he shall be entitled to receive from the State.

DOG LAW.

AN ACT to Protect Sheep Husbandry, to Regulate Matters Connected Therewith, to Provide for Registering, Taxing and Killing Dogs.

[APPROVED APRIL 18, 1881.]

SECTION 1. *Be it enacted by the General Assembly of the State of Indiana*, That any person who shall own or harbor an animal of the dog kind, shall, on or before the 1st day of April, 1882, and each year thereafter, on or before the 1st day of April, shall report the number of dogs owned or harbored by such person, which exceed the age of six months, to the Township Trustee of their respective townships, who shall register and number the same to the proper owner, with a brief description of each dog by sex, color and breed;

and also furnish the owner with a metallic tag, with number and year to correspond with the register, which said owner shall attach to the neck by a collar; for which the owner shall pay the sum of one dollar for a male and the sum of two dollars for a female dog owned, kept or harbored by him or them, and for each dog more than one, the sum of two dollars each; which shall be known as a dog fund.

SEC. 2. It shall be deemed unlawful for any dog to run at large without collar and tag, as provided in this act; and it shall be deemed lawful for any person to kill the same. *Provided, also,* That no tag shall be used or worn by any dog other than the identical ones issued by the trustee, and any attempt to evade this provision shall be held to be a misdemeanor, and be punishable by a fine of not more than twenty-five dollars. *Provided, also,* That in case of the loss of any tag the Trustee shall issue a duplicate thereof for the sum of ten cents, upon application therefor and satisfactory proof furnished that said tag has been lost.

SEC. 3. The Constables of the several townships and towns of the several counties of the State of Indiana, shall proceed to kill all dogs, on and after the 1st day of April, 1882, which shall be found at any time thereafter without collar and tag as herein provided; and the Trustee, on information given by any citizen of any dog not so registered and tagged, shall issue a written notice to any Constable in his township to kill said dog; and it shall be unlawful for the Trustee to divulge or make known the name of any citizen giving such information, and he shall be liable to a fine for each such offense in any sum not exceeding twenty-five dollars. Any person who shall maliciously injure or kill, or any person who shall steal, take and carry away any dog which has been duly registered and is wearing a metallic tag, according to the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction be fined in any sum not exceeding two hundred dollars, to which may be added imprisonment in the county jail for any term not exceeding thirty days. *Provided,* That in all cases where such dogs are injured or killed while off the premises of their owners, and engaged in committing damage to the property of any other person than that of the owner of such dogs, the above provisions and penalties shall not apply.

SEC. 4. Any Constable who shall fail to use diligence to kill any dog after such notice, shall be fined in any sum not exceeding twenty-five dollars for each offense. Such Constable shall be paid fifty cents each for all dogs killed under this act, to be paid out of the dog fund.

SEC. 5. All money derived from the registration of dogs and fines under this act, shall constitute a fund known as a dog fund, for the payment of damages sustained by the owners of sheep maimed or killed by dogs within such township. And each Township Trustee is directed and required to collect the fines annually from the several Justices of the Peace of his township, and to hold the same for such puposes, except so much as may be necessary to carry out the provisions of this act, as follows: Twenty-five cents to the Trustee for each registry, fifty cents to the Constable for each dog killed. *Provided*, That the owner of sheep killed or maimed by dogs shall report such loss to the Trustee within ten days from the time thereof. The Trustee shall register such losses in the order that they are reported, which order shall be observed in the payment of losses when adjusted. *Provided*, That no person shall receive pay for sheep killed or maimed by a dog owned or harbored by himself. *And provided further*, That the fund provided for in section four of an act of the General Assembly of this State, upon this same subject, approved March 2, 1865, on hands with the several Township Trustees in this State, shall, when this act shall become operative, be added to the fund created or to be created under the provisions of this act; and the claimants under the provisions of said act of 1865 shall be entitled to payment where the same has not already been made out of such consolidated fund, in the order of their priority, and when it shall so happen on the first Monday of October, of each year, in any township, that said fund shall accumulate to an amount exceeding fifty dollars, over and above orders drawn against the same, the surplus above the said fifty dollars shall be paid and transferred to the school revenue of the township, and expended as a part thereof for tuition.

SEC. 6. All laws providing for the taxation of dogs, and all laws or parts of laws in conflict with the provisions of this act are hereby repealed. *Provided*, That no tax levied in accordance with the provisions of any law existing prior to the taking effect of this act shall be rendered invalid.

LAW ON FERTILIZERS.

[In force from and after June 1, 1881.]

SEC. 1. Before any one shall sell or offer for sale any commercial fertilizer, he shall furnish the State Chemist with a package of each kind he intends to deal in or offer for sale, with an affidavit that the sample is a true and fair sample of that he intends to offer for sale.

SEC. 2. The Chemist shall make analysis of such samples, and certify to the contents, constituents, elements and per cent. of each in same, name of manufacturer, and the dealer shall place on each package offered for sale labels giving such analysis.

SEC. 3. All packages offered for sale are required to be labelled by these labels, furnished by the State Chemist only, in packages of not less than five hundred, at a nominal price.

SEC. 4. Any one offering for sale packages of any commercial fertilizer not having this label thereon, shall be fined fifty dollars for the first offense, and one hundred dollars for each subsequent offense.

SEC. 5. The professor of chemistry at Purdue University is constituted a State Chemist; and commercial fertilizers are deemed to be every substance manufactured and sold for fertilizing purposes, except such as land plaster.

[Fortunately this act has no repealing clause, and the act passed in 1879 stands to cure a very weak place in the new act, viz: The new act provides no penalty for affixing labels not truly giving the constituent parts of fertilizers, but the old act provides a severe penalty for this, and so the two acts make a pretty strong law—one, we think, that will afford farmers ample protection against fraudulent fertilizers.]

ROAD LAW.

ABSTRACT of the New Law Establishing the Election of Township Superintendents of Highways—Abolition of Supervisors and Road Districts.

The new road law enacted by the Legislature provides for the election, in every township in the State, on the first Monday in April, 1882, and every two years thereafter, of a Superintendent of Roads, who shall have charge of the roads within his township, of all of which he shall have charge both for construction and repair. He shall also execute all orders of the Board of County Commissioners concerning the change, location and vacation of any highway in his township, and shall have charge of all funds for road or bridge purposes. A road poll tax of two dollars is to be assessed upon every able-bodied man between the ages of twenty-one and fifty years, and the County Commissioners shall also levy a tax, not exceeding twenty-five cents on the \$100, on all property in the township subject to State taxation, except that property in incorporated towns shall be exempt from such tax. The Township Super-

intendent shall put all the roads in his territory in as good order as possible during the months of April, May and June of each year and make such ditching, draining and embankments, and build such bridges and culverts as shall seem to him prudent and best to construct a road not less than eighteen feet in width, and when material is at hand may cover nine feet of the same with gravel or any other substance which will make a hard surface, expending all the available means in his hands by the 15th of November of each year. He shall also cause all roads to be mowed at least twice a year, in August and November.

The work is divided into "extraordinary," which must be done during the months of April, May and June, and "ordinary," which must be done between April 1 and November 15, and when the citizens of any township contribute work or money to make any ditch, drain, embankment, or to gravel any such road, the Superintendent shall contribute an equal amount, if he has the means at hand for this purpose. The Superintendent shall appoint at least one roadmaster in each township, and as many others as he may deem necessary; such roadmaster to employ laborers, mechanics and teams, at specified wages usual in the township for such work; such employes to work ten hours a day, the roadmaster being held responsible for the manner and quality of such work. He shall have the power to discharge any hand employed, and shall give his order on the Township Superintendent, which shall be a sufficient voucher. The roadmaster is to receive one dollar and fifty cents per day, of ten hours, and the Superintendent two dollars per day. The Superintendent may let out all work over twenty-five dollars by contract, with power to reject any or all bids.

Any person who shall injure any dam, drain, embankment, ditch, or other construction made for the protection of any highway, or injure or deface any guide-post or inscription, or hinder passengers by obstructing any highway or bridge, or who shall fail to keep to the right hand when meeting another vehicle, shall be subject to a fine of five dollars, and it is made the duty of the Township Superintendent to prosecute the same when information is conveyed to him.

The Superintendent is authorized to enter upon any land adjoining the highway and take any necessary material for the construction of said highway, for which any person aggrieved has action against the township, the methods for the determination of which are fully set out.

It is made the duty of the owner of any land through which any highway runs to remove all obstructions as soon as knowledge of the same comes to him, for which he will be entitled to reasonable compensation.

The office of Supervisor of Roads is abolished, and all his duties are made incumbent upon the Township Superintendent. Persons are to be permitted to work out their poll-tax under direction of the Superintendent. The law contains no emergency clause.

—[*Indiana Farmer.*]

DRAINAGE LAW.

ABSTRACT of the New Law on Drainage.

This act establishes a new system of procedure for drainage of wet lands; provides that petitions for ditching be presented to Circuit Courts; that the Court appoint two commissioners, who, with the County Surveyor, shall serve for three years as a drainage commission in each county, and have control of all ditching operations under the surveillance of the Circuit Court.

OBITUARY.

As a frontispiece for this book, the familiar face of Governor James D. Williams, one of the early ex-Presidents of the Board of Agriculture, will be recognized. The pioneer, farmer, statesman and philanthropist, departed this life at 12:30, noon, Saturday, November 20, 1880, at the age of seventy-two years, ten months and four days.

As beautifully expressed by J. B. Maynard, of the *Indianapolis Sentinel*:

He died full of years and full of honors. He died universally respected. He died in office, the highest within the gift of his fellow-citizens. He died

“Like one who wraps the drapery on his couch
About him and lies down to pleasant dreams.”

Governor Williams lived right, and when the summons came, it found him ready, for he wrought

“With human hands the creed of creeds,
In loveliness of perfect deeds.”

We are inclined to the belief that Governor Williams was not taken by surprise. He was not long confined to his room, but, as disease became more firmly seated, there were premonitions, dispatches to the soul, that the silver cord would soon be cut, and the golden bowl broken. He had ample time to review the past, to contemplate the future, to remember all the friends he had seen around him fall like leaves in wintry weather—wife and children—and to contemplate the bliss of reunion. He did not die at night, nor yet at the dawning, but at high noon—just as the sun had crossed meridian, his soul took its everlasting flight to enter the abodes of rest. He did not die at a time when the earth is robed

in emerald beauty, when flowers are blooming, when birds are singing, and the brooks go laughing to the sea, nor yet when the fields are ready for the harvest; but he died when the earth lay wrapt in a winding-sheet of snow, symbolizing death and suggesting that the year 1880 was soon to yield up his scepter. It may be a fancy, but winter seems to be the most appropriate time for death to reap his harvest. Then the trees are bare; the music of bird and bee is hushed, and the winds go wailing with trailing clouds; the earth is at rest; the seasons have fulfilled their mission, and the old, who have fought the battles of life through three score and ten years or more, may take their silent chambers in the halls of death with less regret than when the earth is robed in vernal beauty, and the sunshine and the balmy air invite the old as well as the young to go forth and enjoy the benedictions of heaven. But death claims all seasons for his own, and in the exercise of his mournful prerogative, has summoned Governor Williams away from his high office and important duties, to a higher and brighter existence.

His death will be mourned by the people of Indiana, and the State and society have sustained a loss not easily repaired, for it is the good fortune of but few men to possess characters in which are combined in so large a degree integrity and efficiency, prudence and courage, kindness and firmness—virtues which will long be remembered by the people of the State whom he has served in various official capacities for more than forty years, retaining to the last a reputation not only unsullied but growing brighter with advancing years.

To the student of biography the life of Governor James D. Williams can not fail of being largely profitable. His public and private life has been marked by an inflexible fealty to truth, to honest convictions, unswervingly maintained. With such a foundation, the superstructure of character must always be imposing, life a success and death a triumph. It would require a volume to analyze the character of the dead Governor and bring out its commanding traits. But now, while the great heart of Indiana is bowed with sorrow and every word referring to the sad event is a sigh of grief, we can only say as a fitting conclusion of this tribute of respect, that

“Doubtless, unto him is given,
A life that bears immortal fruit,
In such great offices as suit
The full-grown energies of Heaven.”

Immediately on the announcement of the death of Gov. Williams, a meeting of the State officers and citizens was called to arrange for giving expression to the high esteem in which the deceased was held, and the loss so keenly felt by his fellow citizens. A committee on memorial resolutions was appointed to report at an adjourned meeting in the legislative hall, which was largely attended. The committee on resolutions, through their chairman, Judge Walter Q. Gresham, of the United States Court, reported the following

Memorial:

The committee appointed to draft resolutions expressing the sense of this meeting, respectfully present the following memorial:

We meet as citizens of a great State to make known our sorrow for the death of Hon. James D. Williams, whose life, and service of the State as its Chief Magistrate, were simultaneously ended on last Saturday. We also come to record our estimate of his character and worth as a man and as a servant of the people.

Governor Williams was born in Pickaway county, Ohio, January 16, 1808. At the age of ten years he came to Indiana with his father's family and settled in Knox county, where he resided from that time until his death. He grew to man's estate upon his father's farm and bore his full share of the toil incident to the farming life of that period. In the midst of his labors he began early in life to take a deep interest in public affairs, and as early as the year 1839 he commenced his official life as a justice of the peace. He resigned this position to take his seat in the lower branch of the State Legislature, to which he was elected in 1843. From that time until he was elected to Congress, in 1874, he served almost continuously either as a Senator or member of the lower house of the Legislature. He remained in Congress until he was elected Governor, in 1876, and his official career was terminated by his death, in this city, at thirty minutes past twelve o'clock in the afternoon, on Saturday, November 20, 1880. In addition to his services as magistrate, legislator and Governor, he was President of the State Board of Agriculture four years, and an active member of the Board sixteen years. His entire official life covered a period of forty-one years.

How he lived in the midst of his family may be more fittingly set forth by those who will soon testify to his eminent private virtues in the presence of those friends and neighbors amongst whom he passed the greater part of his life. It is not improper to say, however, that after the death of his wife, in the month of June last,

Governor Williams was a changed man; and when disease admonished him that the end was near, and the final summons came, he obeyed the call and turned his face toward the grave as one who was going to meet his best friend.

There is profit in the study of the life and career of such a man.

Governor Williams was trained in the severe school of early western pioneer life, and he belonged to a class of men who are rapidly disappearing from our midst. The arduous conditions in which they were born and reared can never be reproduced. Their characters were marked by a sturdy manhood, a frankness of manner, an unfeigned hospitality, a gentleness of disposition, a steadfast devotion to principle, a warmth and permanence of friendship, and a sympathetic tenderness which was the fruit of the peculiar relations of backwoods life. If the modern facilities for intellectual training were lacking, there was an equality of condition and opportunity and a community of hardship which gave ample scope for the play and discipline of the affections, and for the development of those sterling and unselfish qualities which are the best part of the highest type of man. The private life and official career of Governor Williams were distinctly marked by the virtues which grew out of the surroundings of his early life. His stature, form and physiognomy, in which many of the striking qualities of his mind revealed themselves, attested the arduous labors of a youth and early manhood passed amid the dangers and privations of a frontier home. He never lost his fondness for the soil, nor for the men who till it. And in the midst of his most pressing official engagements it was his wont to seek a respite from public care in the active management of his farm at Wheatland.

Governor Williams' fidelity to his official duty was never questioned, but he never forgot that he belonged to the great body of citizens who pay the taxes and whose highest duty and pride it is to contribute to the work of developing and building up the material prosperity and promoting the intellectual advancement of the people. While a young man he evinced a taste for public affairs and an aptitude for dealing with them which are exceptional even among men whose special training naturally evokes these qualities. Discovering this, his neighbors called him to public station, and his services in the State Legislature and in Congress for so many years were always marked by the highest sense of his responsibility to his constituency, and an undeviating fidelity to the public interests. He never permitted the formalities of official station to restrict the freedom of his intercourse with the people, and while he was Gov-

error the humblest citizen of the State could approach him at all times without embarrassment.

It is worthy of note and emphasis that Governor Williams was a man of singular purity of character. His private and domestic virtues are attested by all who enjoyed the intimacy of his personal friendship, and his official integrity was never blurred by even an imputation of dishonesty. His conception of official station was that it was a public trust, to be administered with the same care, prudence and frugality which a wise man would bestow upon his private affairs. It is to his honor that at a time when the tendencies in official station were in the direction of a lavish and careless expenditure of the public moneys, he used his influence in Congress to check those tendencies, and to expose existing abuses. As Governor, he evinced the same watchful care of the public interests, and though a warm partisan no alleged party necessity, no considerations of personal friendship, could swerve him from what he believed to be the path of duty.

It has been said of him that he was too liberal in the use of the pardoning power. The records of his office disclose the fact that the last act of his official life was the granting of a respite to a man condemned to die. That he was too merciful in dealing with his erring fellow-mortals will not be remembered against him by the Merciful Judge in whose presence he now stands.

Measured by the best standards, Governor Williams was a worthy citizen, a faithful public servant, a good man. His virtues were many and conspicuous.

"And e'en his failings leaned to virtue's side."

W. Q. GRESHAM,
SOLOMON CLAYPOOL,
THOMAS F. DAVIDSON,
AUGUSTUS N. MARTIN,
WM. P. FISHBACK.

Hon. William H. English

arose and seconded the adoption of the memorial, at the same time making the following remarks in relation to the deceased:

It was my good fortune to know and be on friendly relations with Governor Williams for a great many years. I may say I knew him intimately for over the third of a century. I met him for the first time in this city; it was in the winter of 1843—thirty-seven years ago. Indianapolis was then a comparatively small place, not larger, probably, than Franklin or Anderson is now.

There was not a completed railroad in the State, and it took three or four days' horseback riding to reach here from such counties as

Knox and Scott, the respective residences of Governor Williams and myself. It was the occasion of the meeting of the Legislature, an event then apparently considered of far more importance by the people than it seems to be now. I came as a candidate for clerk of the House of Representatives. Governor Williams came as a representative of the people of Knox county. I was elected with his aid, and the friendly relations then established were cordially maintained to the end of his life. It is not as a matter of form or conventional duty that I join in these ceremonies. I join with all my heart in paying all the respect I can to the memory of my old friend, and in bearing this public testimony that I knew him to be a just and true man in all the relations of life. He continued to represent the people of Knox county in one or the other branches of the Legislature for fifteen years, showing conclusively the high esteem in which he was held by those who knew him best. He subsequently represented the people of his district in Congress, and from that position was called to be the chief executive officer of this State.

When I say he represented the people, I mean it in the broadest and best sense, for he was literally of the people, and always especially devoted to their interests—himself a hard-working tiller of the soil—a true type of that class of sturdy pioneers, whose stout hearts and strong arms have made Indiana the great and prosperous State it is to-day. The masses of the people did honor to themselves in honoring him, for he was their true representative. He was not a man learned in the lore of books—not in one sense a man of culture—but he was a man of most excellent judgment, and his mind was well stored with useful and practical information; and what is more than all, and better than all, he was, what is said to be God's noblest work, an honest man.

Now, that his long and useful life is ended, and his record forever closed, it can be truthfully said of him that in an age when public servants were not always faithful, he served the people, in various public trusts for a quarter of a century, without his integrity as an officer ever being called in question in a single instance. A man who began the world under the most adverse circumstances, and by his own efforts won his way to position and power, maintaining it through a long series of years, and rising higher and higher, until he died the chief officer of his State, must have had many good qualities; and his pure and stainless private life, and his spotless public record, demand that his memory should be cherished by all his countrymen.

Ex-Governor Hendricks

then arose and offered the following remarks:

MR. CHAIRMAN.—I can not say much upon this occasion. Governor Williams is so well known to the people of Indiana, that much need not be said so far as they are concerned. I believe that no man living has served the people of the State in so many important respects for so long a period, commencing, as I perceive, by the memorial, in 1839, almost continuously. He was a public servant until the day of his death, more than forty years—not all the time in public service, but for the greater portion of that period, and what gives emphasis to this circumstance, is the fact that for the most of the time he was selected by his immediate neighbors, among whom he was raised, and with whom he had all the relations of life. Such a man, so indorsed, is worthy of the respect which we pay him to-day. It is a great loss when such a man dies, and I feel that the public service suffers in his death. I wish simply, in rising, to express my profound regard for his character, and for the excellence of his public service.

Major J. W. Gordon.

MR. CHAIRMAN.—There are many here who know more of Governor Williams than I do. I made his acquaintance when I sustained a very humble relation to the General Assembly in 1851-2. I was then in the House of Representatives, a reporter for one of the city papers. He was a member, I do not know, whether of the Senate or House, but connected with the public service. At that time he was a member of an agricultural association, gotten up by Governor Wright, for the purpose of communicating the observations of the thoughts of the farmers who were connected with the administration of the government. He took an active and earnest part in all the meetings of that agricultural association, and was an intelligent member, communicating much valuable information in regard to stock raising and all of the branches of farming, which he acquired by experience and a long course of observation. His intercourse was uniformly kindly to all members of the association, and especially to its officers and attaches, of which I was one. I shall never forget his generous kindness to me in that relation. When afterward I met him in the General Assembly, and renewed my acquaintance with him, and found him the same kindly disposed man—generous even to his adversaries, and claiming but very little for himself—but the commonest courtesy from them, and satisfied with this common courtesy. I never, as has been often said to-day, heard his honesty or integrity questioned. His political system may have

been wrong in many important respects, but he was a sincere believer in the creed which he had adopted for life and for his political action, and that is all we can expect or ask at the hands or life of any man. A sincere man, devoted to his own convictions, honestly endeavoring to crown them with success in political life, is always entitled to the respect of every other sincere man, however widely their creeds may differ. When a generation of men shall come—as it will come in the State of Indiana—that will believe that economy will be subserved by lavish expenditure of money in building a temple to preserve the memory of the great who have served the people, Governor Williams' name, and memory, and face and monument will be entitled to a conspicuous place in that temple.

General Ben. Harrison,

Governor Williams' opponent in his race for Governor, then arose and said :

Governor Williams' name and my own were associated in one of the sharpest political contests, perhaps, that has been witnessed in the State, and yet to-day, sir, as I looked upon his quiet face it was a pleasant reflection to me that, so far as I know, this contest had developed no personal unkindness to me. If the deceased Governor ever at any time uttered an unkind word of me, it never reached my ears. I am sure that in the entire campaign no one heard from my lips any word of personal bitterness or unkindness. I thought to-day that there was a lesson in this for all of us—that there comes a time in the lives of all men, particularly with those who live nearest, when any act or word of bitterness or spoken slander becomes a bitter memory. I am glad to be able here to-day to mingle, with those who stood nearer to him than I did, my own expressions of sincere regret at the death of Governor Williams. The Constitution of Indiana provides that the Governor shall hold his office for four years. That, sir, is written of the officer—not of the man. God appoints the tenures of human life, and their length is controlled by his unfathomable will. It seems to us inopportune, this dying before the official term was closed; that he should have been deprived of the opportunity of speaking the farewell word of counsel to the Legislature of Indiana and handing over to his successor the insignia of his office. But we don't judge these things rightly, I suppose. I never quite liked in the cemetery or even in the hall below this type of the broken shaft. We shall know sometime, I expect, that every life has been complete. If there were nothing to be said of Governor Williams' relation to the public affairs of Indiana at all, his life would be an honorable and

successful one. I have always felt that the successful pioneer, one of those who pressed toward the edge of civilization in the early days and made a successful fight with the wilderness, and cleared the pillared forest and made of it a meadow, and of the marsh a dry field, and who built up around him and for himself and for the family that God gave him, a competence, elevated them, that that life was an honorable life and worthy of mention in any assembly. This work Governor Williams has done conspicuously. There was to me a very touching sight. It is what has been alluded to in the memorial which you have heard. For fifty years he had lived with that wife who had preceded him a few months to that door that opens not outward. We are often apt to think of this relation as that of one in which the wife leans upon the husband. I think we do not rightly describe it when we think of it so. It is but a single aspect of that most tender relation in life. Undoubtedly the stalwart man who lies dead in our midst to-day knew what it was to lean on the wife, and it is tender and touching beyond expression to-day to feel that when that support was withdrawn the tall man bowed himself, and awaited not regretfully the coming of death. With the sincerest heart I unite to-day with those who knew him better, in this testimonial of respect to his memory.

Hon. W. W. Woollen,

Secretary of the meeting, related the following incident in the life of the deceased :

I don't rise, sir, to pass an eulogy upon our dead Governor, but simply to relate an incident that happened under my observation, and which will illustrate his love of children, and their influence over him. This characteristic of our departed friend has not been touched in the memorial offered by the committee, nor by any of the gentlemen who have preceded me.

It was my fortune in last April to accompany Governor Williams in his trip to the Gulf. At every point of importance upon the road he was received by delegations of people, both as officers and as private citizens. When he reached the city of Mobile he was met by the recorder, who is the chief executive officer of Mobile, by the president of the Cotton Exchange and by the president of the Board of Trade, who escorted him to his quarters at the Battle House. After dining he held quite a levee in the parlors of the hotel, where many of the leading people of the city called upon him. While he was engaged entertaining his callers, a young girl, some twelve or fourteen years old, called at the office of the hotel, with a large bouquet in her hands, and asked for him. The clerk, thinking she was a flower girl, anxious to dispose of her flowers,

essayed to have her leave the hotel without seeing the Governor, but this she would not do. She came into the parlor where he was seated, surrounded by a number of gentlemen and ladies, and approaching him said: "This is Governor Williams, I believe." "Yes, my daughter," he replied. She then presented him with her bouquet, which he received with the grace of a courtier. She then asked him if he did not remember receiving a bouquet when he was at Laporte during the canvass of 1876, from a little girl who was sick. He replied that he remembered it well. She then said: "I am the little girl who sent it to you, and the kind words you sent me in return caused my mamma to be very anxious to see you." "Where is your mamma?" asked the Governor. "At home," replied the girl, giving the street and number. "Your mamma shall see me," said the Governor, and he arose, excused himself to the ladies and gentlemen present and left the room. On reaching the street he called a hack, and with the little girl went to the home of the mother. I think this incident goes far to illustrate one trait in his character which has not hitherto been spoken of.

Ex-Governor Baker.

I desire to say a word in this tribute of respect to our deceased friend. I, too, have known him a little over twenty-five years, and always found him to be a kind-hearted, honest man. I presided over the Senate at the time he was a member, and our relations were always most cordial. He treated me with justice and kindness. He was not a learned man but not an uneducated man. I mean by that, he was a man who knew how to think. He had learned the art of thinking, but had he been an educated man he would have been a good lawyer. He had a discriminating mind. He was one of the best parliamentarians I ever knew; hardly ever made a mistake. He was a man of a strong, generous, emotional nature. I have seen him on several occasions when he could not control his emotions. I was with him a few weeks ago at the house of a friend when some songs of the little folks touched him so that he filled up and could not speak.

Rev. Dr. W. A. Bartlett,

Pastor of the Second Presbyterian Church, offered the following beautiful testimonial to his memory:

"I came in here without any invitation, simply as a citizen of the State of Indiana, to bring the tribute of my sympathy to this occasion. When a man that has been so trusted by the people as this record recites, dies, there is one remark to be made upon his

services—that his life is an evidence of certain hidden power. His position, his sustained position, moving in an increasing climax to the close, is an indication of that. There is power somewhere. In the Chief Magistrate who has gone, it was not in a college education, it was not in any early advantages in the refinements of culture, in the association and intimate acquaintance with large libraries. And hence men of other lands and of other days might be baffled to account for it, but as American citizens we know just whence he came and how he was begotten into the confidences of the people. He is a native and a natural product of American institutions. It is the grandeur of this Nation of which we are a part, and of this State, which is so honorably related with its sister States in bearing the ægis of the Government. It is an honor, I say, that we can take the humblest citizen and make him fit for the highest trust. Think of the pathos of the beginning of the life of this plain man working for twenty cents a day to pay for his father's coffin. Cincinnatus was found at the plow when his promotion came. Our Governor, we may say, has never left the plow. It is a credit to the institutions of the country that you can take the plain workingmen, that you can take the early suffering pioneers, men who can only make headway by virtues that are rugged and severe and stern, virtue that labors with unremitting toil, the ingenuity that comes from making much out of little, building your house with a hammer and a saw rather than with the refined implements of a later day. I say it is the grandeur of a Nation that can take up such a man and place him in offices of confidence and of trust, and it is the seal of approbation, when at his death his neighbors, his friends, those who have differed with him in many matters can bear uniform testimony that in an age that not has been marked with great integrity, he was integral, whole, untainted, sound, honest. This is much. Why, think, of his life, begun when Napoleon Bonaparte the First reigned, before the battle of Waterloo. He was born before the beginning of Queen Victoria's reign. Let you and I glance over the map of the world and pick up Kingdom after Kingdom, and mark the revolution and the changes since. Mighty inventions, wonderful changes in the view of every question, religious and political. But Napoleons may come and go, and the ages cycle on, but there never will a day come that is so refined, when the sterling qualities of integrity and honest effort and purity of life will not be emblazoned on the highest escutcheon of any State."

Senator McDonald,

the Chairman, then said :

FELLOW-CITIZENS :—In submitting for your adoption the memorial that has been presented by the committee after what has been said by the various persons who have seconded its adoption, and responded to its sentiments, there is nothing left for me except to simply add that Governor Williams possessed a character as open as the day. There was no mystery about it. It was one of great simplicity, resting upon the strong foundation of common sense, governed and controlled by the highest principles of right and justice, making one of nature's great chancellors, and these qualities will keep his memory long in the minds of the people of Indiana. The address and resolutions will be regarded as adopted unanimously, without any dissenting voice.

Hon. Albert G. Porter,

Governor-elect, offered the following :

Resolved, That a copy of the proceedings of the meeting be communicated to the family of the deceased, and that the proceedings of the meeting be communicated through the Governor to the Legislature.

Adopted.

The Chairman then said :

It is proper to state to the meeting that the arrangements adopted at the meeting last Saturday evening have been fully carried out, and at 5 o'clock this evening the remains of the deceased will be carried to his North Meridian street residence, and to-morrow at 8 o'clock, or near that time, the remains will be taken to the Union depot for the purpose of being transmitted to his home in Knox county, and this will be the last of the citizens' meeting in connection with these obsequies ; and from this time forward all citizens who may desire to take a part in further respect to his memory while his remains are still retained in the capital, that they can do so by attending at those places.

On motion of Hon. W. H. English the meeting adjourned.

Methodist Ministers.

The following preamble and resolution were passed by the Methodist preachers' meeting of Indianapolis, regarding the death of Governor Williams :

WHEREAS, In the order of Providence, Hon. James D. Williams, Governor of Indiana, after a long and eventful life, has been called to pay the debt of nature ; therefore,

Resolved, By the preachers' meeting of the Methodist Episcopal church of Indianapolis, that they do hereby express their regard for the high character and sterling integrity of Governor Williams during the period of his public life, and extend their sympathy to the members of his family.

W. R. HALSTEAD,

GEORGE L. CURTISS,

S. M. VERNON,

Committee on Resolutions.

Governor Gray's Proclamation.

INDIANAPOLIS, Nov. 22, 1880.

State of Indiana, by His Excellency, Isaac P. Gray, Governor :

A proclamation announcing the death of Governor James D. Williams, and the removal of his body to his late home, in Knox county, for burial. To the people of Indiana it is announced with sincere regret that James D. Williams departed this life at his home in this city, Saturday, November 20, having faithfully and honestly discharged the laborious duties conferred upon him until within a few hours of his death. Committees of citizens at the capital are charged with the duties of arranging for appropriate service in the city during to-day, and for the removal of the body to Knox county to-morrow. So far as urgent public business permitted, the offices of State have been closed to-day. It seems proper that during to-morrow and the day following, while the remains of our distinguished fellow-citizen and late public servant are in progress to Knox county, and while lying in state at the county seat, and while in progress to his late homestead, and while his neighbors of more than three-score years are paying their last tributes of respect to his memory, and committing his body to its quiet resting place beside that of his beloved wife, but lately deceased, we of the entire State, whom he has served, continue the expressions of our respect. To this end I recommend that, so far as public business will permit, the offices of the State be closed until Friday next, recalling in the meantime the recent proclamation appointing Thursday as a day of thanksgiving and praise, and by operation of law as a holiday to be appropriately observed by ceasing from secular labors and looking to the Governor of all men, into whose presence our late chief magistrate has so soon been called.

Witness the seal of the State and my signature, at Indianapolis,
[SEAL.] this 22d day of November, 1880.

By the Governor:

ISAAC P. GRAY.

J. G. SHANKLIN, *Secretary of State.*

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